Table 3-14
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES

PM

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 13 Blast Furnace	Casthouse Fugitives *	609,592	hot metal	0.60	lb/ton	99.80%	N/A	0.1097	0.0251	AP-42
	Casthouse Emission Control Baghouse	256	hours	0.0024	lb/ton	N/A	N/A	0.0003	0.0001	SIP Limit (Controlled Emissions)
	Slag Pit Operations	152,398	slag	0.106	lb/ton	0.00%	0.00%	8.0771	1.8441	ISPAT Inland Permit Application
PCI	Coal Pulverizer Bldg.	91,439	coal	0.008	lb/ton	N/A	N/A	0.3658	0.0835	Ispat Inland PCI Controlled Emission Factor
No. 1 BOP Shop	Fugitives (Roof Monitor)					N/A	N/A	0.0000	0.0000	See PM Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	0	molten steel	36.97	lb/ton	99.72%	99.90%	0.0000	0.0000	AP-42
	Hot Metal Desulfurization Baghouse	0	hours	15.00	lb/hr	N/A	N/A	0.0000	0.0000	SIP Limit (Controlled Emissions)
	Continuous Casting	0	molten steel	0.014	lb/ton	0.00%	0.00%	0.0000	0.0000	PM10 SIP Background Documentation for No. 2 Caster
	CAS Bell/OB Lancing Baghouse	0	hours	5.100	lb/hr	N/A	N/A	0.0000	0.0000	SIP Limit (Controlled Emissions)
	Flux Handling Baghouse	0	hours	1.920	lb/hr	N/A	N/A	0.0000	0.0000	SIP Modeling Limit
No. 1 BOP Caster	Fugitives (Roof Monitor) *	0	molten steel	0.014	lb/ton	0.00%	N/A	0.0000	0.0000	PM10 SIP Background Documentation for No. 2 Caster

Table 3-14
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES

PM

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 2 Q-BOP Shop LMF	Fugitives (Roof Monitor)					N/A	N/A	12.7917	2.9205	See PM Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	717,167	molten steel	36.960	lb/ton	99.72%	99.90%	13.2161	3.0174	AP-42
	Hot Metal Desulfurization Baghouse	350	hours	13.000	lb/hr	N/A	N/A	2.2750	0.5194	SIP Limit (Controlled Emissions)
	Continuous Casting *	717,167	molten steel	0.014	lb/ton	95.00%	99.99%	0.0001	0.0000	PM10 SIP Background Documentation for No. 2 Caster
	Secondary Emissions Baghouse	350	hours	27.000	lb/hr	N/A	N/A	4.7250	1.0788	SIP Limit (Controlled Emissions)
	116' Elevation North and South Flux Handling System Baghouses	350	hours	1.800	lb/hr	N/A	N/A	0.3150	0.0719	SIP Limit (Controlled Emissions)
	North Roof Baghouse (166')	350	hours	0.510	lb/hr	N/A	N/A	0.0893	0.0204	SIP Limit (Controlled Emissions)
	South Roof Baghouse (166')	350	hours	0.510	lb/hr	N/A	N/A	0.0893	0.0204	SIP Limit (Controlled Emissions)
	Middle Roof Baghouse (166')	350	hours	0.510	lb/hr	N/A	N/A	0.0893	0.0204	SIP Limit (Controlled Emissions)
	Day Tank Lime Silo Baghouse	350	hours	0.810	lb/hr	N/A	N/A	0.1418	0.0324	SIP Modeling Limit
	Lime Dump Station Baghouse	350	hours	0.450	lb/hr	N/A	N/A	0.0788	0.0180	SIP Modeling Limit
	No. 1 Hot Fume Exhaust Baghouse	350	hours	5.100	lb/hr	N/A	N/A	0.8925	0.2038	SIP Limit (Controlled Emissions)
	No. 2 Hot Fume Exhaust Baghouse	350	hours	5.1	lb/hr	N/A	N/A	0.8925	0.2038	SIP Limit (Controlled Emissions)
	LMF 1 & 2 Material Handling System	350	hours	3.830	lb/hr	N/A	N/A	0.6703	0.1530	SIP Limit (Controlled Emissions)
	No. 3 LMF Hot Fume Extracation Exhaust	350	hours	2.700	lb/hr	N/A	N/A	0.4725	0.1079	SIP Limit (Controlled Emissions)
	RH Vacuum Degasser Slag Conditioning Baghouse	350	hours	5.490	lb/hr	N/A	N/A	0.9608	0.2193	SIP Limit (Controlled Emissions)
	No. 3 LMF Material Handling System	350	hours	0.000	lb/hr	N/A	N/A	0.0000	0.0000	SIP Limit (Controlled Emissions)
No. 2 Q-BOP Caster	Fugitives (Roof Monitor) *	717,167	molten steel	0.014	lb/ton	95.00%	N/A	0.0753	0.0172	PM10 SIP Background Documentation for No. 2 Caster

* - Emission unit locations where 70% containment efficiency was applied to the controlled annual change in emissions

Table 3-14a
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
FUGITIVE EMISSION CALCULATION

PM

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
No. 1 BOP Shop	Gas Cleaning System (2 units)	0	molten steel	36.96	lb/ton	99.72%	0.0000	0.0000	AP-42
	Hot Metal Desulfurization Baghouse *	0	hot metal	1.09	lb/ton	98.50%	0.0000	0.0000	AP-42
	CAS Bell Baghouse	0	molten steel	0.0640	lb/ton	94.99%	0.0000	0.0000	Source Registration Notification (April 1995)
	Flux Handling Baghouse	0	molten steel	0.0190	lb/ton	99.00%	0.0000	0.0000	AP-42
Total Fugitives (Roof Monitor - 70% Building Containment Efficiency where applicable)							0.000	0.000	
No. 2 Q-BOP Shop & LMF	Gas Cleaning System (2 units)	717,167	molten steel	36.7900	lb/ton	99.72%	11.0815	2.5300	AP-42
	Hot Metal Desulfurization Baghouse	609,592	hot metal	1.2590	lb/ton	99.40%	0.6907	0.1577	AP-42
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.17	lb/ton	94.99%	0.3054	0.0697	Gary Works No. 3 LMF CPA Addendum (April 1995)
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.17	lb/ton	94.99%	0.3054	0.0697	Gary Works No. 3 LMF CPA Addendum (April 1995)
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.019	lb/ton	95.00%	0.0681	0.0156	AP-42
	No. 3 LMF Hot Fume Extracation Exhaust/ Material Handling	239,056	molten steel	0.17	lb/ton	97.99%	0.1225	0.0280	Gary Works No. 3 LMF CPA Addendum (April 1995)
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.165	lb/ton	100.00%	0.0000	0.0000	Nippon Steel Test
	116' Elevation North and South Flux Handling Baghouse	717,167	molten steel	0.019	lb/ton	99.00%	0.0204	0.0047	Same as LMF Material Handling
	North Roof Baghouse (166')	717,167	molten steel	0.019	lb/ton	99.00%	0.0204	0.0047	Same as LMF Material Handling
	South Roof Baghouse (166')	717,167	molten steel	0.019	lb/ton	99.00%	0.0204	0.0047	Same as LMF Material Handling
	Middle Roof Baghouse (166')	717,167	molten steel	0.019	lb/ton	99.00%	0.0204	0.0047	Same as LMF Material Handling
	Day Tank Lime Silo Baghouse *	717,167	molten steel	0.019	lb/ton	99.00%	0.0681	0.0156	Same as LMF Material Handling
	Lime Dump Station Baghouse *	717,167	molten steel	0.019	lb/ton	99.00%	0.0681	0.0156	Same as LMF Material Handling
Total Fugitives (Roof Monitor - 70% Building Containment Efficiency where applicable)							12.7917	2.9205	

* - Emissions Unit Locations where 70% containment efficiency was not applicable.

Table 3-15
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES

PM_{10}

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 13 Blast Furnace	Casthouse Fugitives *	609,592	hot metal	0.306	lb/ton	99.80%	N/A	0.0560	0.0128	AP-42
	Casthouse Emission Control Baghouse	256	hours	38.570	lbs/hr	N/A	N/A	4.9410	1.1281	SIP Limit (Controlled Emissions)
	Slag Pit Operations	152,398	slag	0.0425	lb/ton	0.00%	0.00%	3.2385	0.7394	ISPAT Inland Permit
PCI	Coal Pulverizer Bldg.	91,439	coal	0.007	lb/ton	N/A	N/A	0.3200	0.0731	Ispat Inland PCI Controlled Emission Factor
No. 1 BOP Shop	Fugitives (Roof Monitor)					N/A	N/A	0.0000	0.0000	See PM10 Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	0	molten steel	24.40	lb/ton	99.72%	99.90%	0.0000	0.0000	AP-42
	Hot Metal Desulfurization Baghouse	0	hours	15.00	lbs/hr	N/A	N/A	0.0000	0.0000	SIP Limit (Controlled Emissions)
	Continuous Casting	0	molten steel	0.0041	lb/ton	0.00%	0.00%	0.0000	0.0000	PM10 SIP Background Documentation for No. 2 Caster
	CAS Bell/OB Lancing Baghouse	0	hours	5.1000	lbs/hr	N/A	N/A	0.0000	0.0000	SIP Limit (Controlled Emissions)
	Flux Handling Baghouse	0	hours	1.9200	lbs/hr	N/A	N/A	0.0000	0.0000	SIP Modeling Limit
No. 1 BOP Caster	Fugitives (Roof Monitor) *	0	molten steel	0.0041	lb/ton	0.00%	N/A	0.0000	0.0000	PM10 SIP Background Documentation for No. 2 Caster

Table 3-15
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
PM_{10}
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 2 Q-BOP Shop LMF	Fugitives (Roof Monitor)					N/A	N/A	8.3113	1.8976	See PM10 Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	717,167	molten steel	24.1000	lb/ton	99.72%	99.62%	32.4977	7.4196	AP-42
	Hot Metal Desulfurization Baghouse	350	hours	13.0000	lbs/hr	N/A	N/A	2.2750	0.5194	SIP Limit (Controlled Emissions)
	Continuous Casting *	717,167	molten steel	0.0041	lb/ton	95.00%	99.00%	4.19E-03	9.57E-04	PM10 SIP Background Documentation for No. 2 Caster
	Secondary Emissions Baghouse	350	hours	27.0000	lbs/hr	N/A	N/A	4.7250	1.0788	SIP Limit (Controlled Emissions)
	116' Elevation North and South Flux Handling System Baghouses	350	hours	1.8000	lbs/hr	N/A	N/A	0.3150	0.0719	SIP Limit (Controlled Emissions)
	North Roof Baghouse (166')	350	hours	0.5100	lbs/hr	N/A	N/A	0.0893	0.0204	SIP Limit (Controlled Emissions)
	South Roof Baghouse (166')	350	hours	0.5100	lbs/hr	N/A	N/A	0.0893	0.0204	SIP Limit (Controlled Emissions)
	Middle Roof Baghouse (166')	350	hours	0.5100	lbs/hr	N/A	N/A	0.0893	0.0204	SIP Limit (Controlled Emissions)
	Day Tank Lime Silo Baghouse	350	hours	0.8100	lbs/hr	N/A	N/A	0.1418	0.0324	SIP Modeling Limit
	Lime Dump Station Baghouse	350	hours	0.4500	lbs/hr	N/A	N/A	0.0788	0.0180	SIP Modeling Limit
	No. 1 Hot Fume Exhaust Baghouse	350	hours	5.10	lbs/hr	N/A	N/A	0.8925	0.2038	SIP Limit (Controlled Emissions)
	No. 2 Hot Fume Exhaust Baghouse	350	hours	5.10	lbs/hr	N/A	N/A	0.8925	0.203B	SIP Limit (Controlled Emissions)
	LMF 1 & 2 Material Handling System	350	hours	3.830	lbs/hr	N/A	N/A	0.6703	0.1530	SIP Limit (Controlled Emissions)
	No. 3 LMF Hot Fume Extracation Exhaust/ Material Handling System	350	hours	2.70	lbs/hr	N/A	N/A	0.4725	0.1079	SIP Limit (Controlled Emissions)
	RH Vacuum Degasser Slag Conditioning Baghouse	350	hours	5.49	lbs/hr	N/A	N/A	0.9608	0.2193	SIP Limit (Controlled Emissions)
	LMF 3 Material Handling System	350	hours	0.000	lbs/hr	N/A	N/A	0.0000	0.0000	Not Applicable
No. 2 Q-BOP Caster	Fugitives (Roof Monitor) *	717,167	molten steel	0.0041	lb/ton	95.00%	N/A	0.0221	0.0050	PM10 SIP Background Documentation for No. 2 Caster

* - Emission unit locations where 70% containment efficiency was applied to the controlled annual change in emissions

Table 3-15a
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
FUGITIVE EMISSION CALCULATION

PM_{10}

All Additional Hot Metal Through No. 2-Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
No. 1 BOP Shop	Gas Cleaning System (2 units)	0	molten steel	24.40	lb/ton	99.72%	0.0000	0.0000	AP-42
	Hot Metal Desulfurization Baghouse *	0	hot metal	0.26	lb/ton	98.50%	0.0000	0.0000	AP-42
	CAS Bell Baghouse	0	molten steel	0.0640	lb/ton	94.99%	0.0000	0.0000	Source Registration Notification (April 1995)
	Flux Handling Baghouse	0	molten steel	0.0090	lb/ton	99.00%	0.0000	0.0000	AP-42
Total Fugitives (Roof Monitor - 70% Building Containment Efficiency where applicable)							0.000	0.000	
No. 2 Q-BOP Shop & LMF	Gas Cleaning System (2 units)	717,167	molten steel	24.1000	lb/ton	99.72%	7.2592	1.6573	AP-42
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.3340	lb/ton	99.40%	0.1832	0.0418	AP-42
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.17	lb/ton	94.99%	0.3054	0.0697	Gary Works No. 3 LMF CPA Addendum (April 1995)
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.17	lb/ton	94.99%	0.3054	0.0697	Gary Works No. 3 LMF CPA Addendum (April 1995)
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.009	lb/ton	95.00%	0.0323	0.0074	AP-42
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.17	lb/ton	97.99%	0.1225	0.0280	Gary Works No. 3 LMF CPA Addendum (April 1995)
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.165	lb/ton	100.00%	0.0000	0.0000	Nippon Steel Test
	LMF 3 Material Handling System	239,056	molten steel	0.009	lb/ton	97.99%	0.0065	0.0015	AP-42
	116' Elevation North and South Flux Handling Baghouse	717,167	molten steel	0.009	lb/ton	99.00%	0.0097	0.0022	Same as LMF Material Handling
	North Roof Baghouse (166')	717,167	molten steel	0.009	lb/ton	99.00%	0.0097	0.0022	Same as LMF Material Handling
	South Roof Baghouse (166')	717,167	molten steel	0.009	lb/ton	99.00%	0.0097	0.0022	Same as LMF Material Handling
	Middle Roof Baghouse (166')	717,167	molten steel	0.009	lb/ton	99.00%	0.0097	0.0022	Same as LMF Material Handling
	Day Tank Lime Silo Baghouse *	717,167	molten steel	0.009	lb/ton	99.00%	0.0323	0.0074	Same as LMF Material Handling
	Lime Dump Station Baghouse *	717,167	molten steel	0.009	lb/ton	99.00%	0.0323	0.0074	Same as LMF Material Handling
Total Fugitives (Roof Monitor - 70% Building Containment Efficiency where applicable)							8.3113	1.8976	

* - Emissions Unit Locations where 70% containment efficiency was not applicable.

Table 3-16
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES

SO_2

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 13 Blast Furnace	Casthouse Fugitives	609,592	hot metal	0.276	lb/ton	99.80%	N/A	0.1682	0.0384	June 11, 2002 letter and SO2 SIP
	Casthouse Emission Control Baghouse	609,592	hot metal	0.276	lb/ton	99.80%	0.00%	83.9554	19.1679	SIP Limit and Future Production Rate
	Slag Pit Operations	609,592	hot metal	0.0400	lb/ton	0.00%	0.00	12.1918	2.7835	EWB Engineering Calculation
PCI	Coal Pulverizer Bldg.	91,439	coal	0.00	lb/ton	N/A	N/A	0.0000	0.0000	Not Applicable
No. 1 BOP Shop	Fugitives (Roof Monitor)					N/A	N/A	0.0000	0.0000	See SO2 Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	0	molten steel	0.00	lb/ton	0.00%	0.00%	0.0000	0.0000	Not Applicable
	Hot Metal Desulfurization Baghouse	0	hot metal	0.05	lb/ton	98.50%	0.00%	0.0000	0.0000	June 11, 2002 letter and SO2 SIP
	Continuous Casting	0	molten steel	0.00	lb/ton	0.00%	0.00%	0.0000	0.0000	Not Applicable
	CAS Bell/OB Lancing Baghouse	0	molten steel	0.0000	lb/ton	94.99%	0.00%	0.0000	0.0000	Not Applicable
	Flux Handling Baghouse	0	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
No. 1 BOP Caster	Fugitives (Roof Monitor)	0	molten steel	0.0000	lb/ton	0.00%	N/A	0.0000	0.0000	Not Applicable

Table 3-16
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
SO_2
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 2 Q-BOP Shop LMF	Fugitives (Roof Monitor)					N/A	N/A	0.0914	0.0209	See SO2 Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	717,167	molten steel	0.0000	lb/ton	0.00%	0.00%	0.0000	0.0000	Not Applicable
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.0500	lb/ton	99.40%	0.00%	15.1484	3.4585	June 11, 2002 letter and SO2 SIP
	Continuous Casting	717,167	molten steel	0.0000	lb/ton	95.00%	0.00%	0.0000	0.0000	Not Applicable
	Secondary Emissions Baghouse	717,167	molten steel	0.0000	lb/ton	0.00%	0.00%	0.0000	0.0000	Not Applicable
	116' Elevation North and South Flux Handling System Baghouses	717,167	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	North Roof Baghouse (166')	717,167	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	South Roof Baghouse (166')	717,167	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Middle Roof Baghouse (166')	717,167	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Day Tank Lime Silo Baghouse	717,167	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Lime Dump Station Baghouse	717,167	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.00	lb/ton	94.99%	0.00%	0.0000	0.0000	Not Applicable
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.00	lb/ton	94.99%	0.00%	0.0000	0.0000	Not Applicable
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.00	lb/ton	95.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.00	lb/ton	97.99%	0.00%	0.0000	0.0000	Not Applicable
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.00	lb/ton	100.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Material Handling System	239,056	molten steel	0.00	lb/ton	97.99%	0.00%	0.0000	0.0000	Not Applicable
No. 2 Q-BOP Caster	Fugitives (Roof Monitor)	717,167	molten steel	0.0000	lb/ton	95.00%	N/A	0.0000	0.0000	Not Applicable

Table 3-16a

US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
FUGITIVE EMISSION CALCULATION

SO_2

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
No. 1 BOP Shop	Gas Cleaning System (2 units)	0	molten steel	0.00	lb/ton	99.72%	0.0000	0.0000	Not Applicable
	Hot Metal Desulfurization Baghouse	0	hot metal	0.05	lb/ton	98.50%	0.0000	0.0000	Hot Metal Desulf Factor
	CAS Bell Baghouse	0	molten steel	0.0000	lb/ton	94.99%	0.0000	0.0000	Not Applicable
	Flux Handling Baghouse	0	molten steel	0.0000	lb/ton	99.00%	0.0000	0.0000	Not Applicable
						Total Fugitives	0.000	0.000	
No. 2 Q-BOP Shop & LMF	Gas Cleaning System (2 units)	717,167	molten steel	0.0000	lb/ton	99.72%	0.0000	0.0000	Not Applicable
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.0500	lb/ton	99.40%	0.0914	0.0209	Hot Metal Desulf Factor
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.00	lb/ton	94.99%	0.0000	0.0000	Not Applicable
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.00	lb/ton	94.99%	0.0000	0.0000	Not Applicable
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.00	lb/ton	95.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.00	lb/ton	97.99%	0.0000	0.0000	Not Applicable
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.00	lb/ton	100.00%	0.0000	0.0000	Not Applicable
	LMF 3 Material Handling System	239,056	molten steel	0.00	lb/ton	97.99%	0.0000	0.0000	Not Applicable
						Total Fugitives	0.0914	0.0209	Not Applicable

Table 3-17

US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES

NO_X

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 13 Blast Furnace	Casthouse Fugitives	609,592	hot metal	0.0248	lb/ton	99.80%	N/A	0.0151	0.0035	ISPAT Inland Stack Test
	Casthouse Emission Control Baghouse	609,592	hot metal	0.0248	lb/ton	99.80%	0.00%	7.5438	1.7223	ISPAT Inland Stack Test
	Slag Pit Operations	152,398	slag	0.0137	lb/ton	0.00%	0.00%	1.0439	0.2383	ISPAT Inland Permit Application
PCI	Coal Pulverizer Bldg.	91,439	coal	0.000	lb/ton	N/A	N/A	0.0000	0.0000	Not Applicable
No. 1 BOP Shop	Fugitives (Roof Monitor)					N/A	N/A	0.0000	0.0000	See NOx Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	0	molten steel	0.0800	lb/ton	99.72%	0.00%	0.0000	0.0000	AIRS
	Hot Metal Desulfurization Baghouse	0	hot metal	0.0024	lb/ton	98.50%	0.00%	0.0000	0.0000	ISPAT Inland Stack Test
	Continuous Casting	0	molten steel	0.00	lb/ton	0.00%	0.00%	0.0000	0.0000	Not Applicable
	CAS Bell/OB Lancing Baghouse	0	molten steel	0.0000	lb/ton	94.99%	0.00%	0.0000	0.0000	Not Applicable
	Flux Handling Baghouse	0	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	No combustion
No. 1 BOP Caster	Fugitives (Roof Monitor)	0	molten steel	0.0000	lb/ton	0.00%	N/A	0.0000	0.0000	Not Applicable

Table 3-17
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES

NO_X

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 2 Q-BOP Shop LMF	Fugitives (Roof Monitor)					N/A	N/A	0.1278	0.0292	See NOx Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	717,167	molten steel	0.08	lb/ton	99.72%	0.00%	28.6064	6.5311	AIRS
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.0024	lb/ton	99.40%	0.00%	0.7271	0.1660	ISPAT Inland Stack Test
	Continuous Casting	717,167	molten steel	0.00	lb/ton	95.00%	0.00%	0.0000	0.0000	Not Applicable
	Secondary Emissions Baghouse	717,167	molten steel	0.0000	lb/ton	99.72%	0.00%	0.0000	0.0000	Not Applicable
	116' Elevation North and South Flux Handling System Baghouses	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	North Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	South Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Middle Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Day Tank Lime Silo Baghouse	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Lime Dump Station Baghouse	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.003	lb/ton	94.99%	0.00%	0.3406	0.0778	Inland Steel EAF Shop modifications construction permit application submitted March 1994
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.003	lb/ton	94.99%	0.00%	0.3406	0.0778	Inland Steel EAF Shop modifications construction permit application submitted
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.00	lb/ton	95.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.003	lb/ton	97.99%	0.00%	0.3514	0.0802	Inland Steel EAF Shop modifications construction permit application submitted March 1994
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.00015	lb/ton	100.00%	0.00%	0.0100	0.0023	Permit Application for PH Vacuum Degasse (October 1988)
	No. 3 LMF Material Handling System	239,056	molten steel	0.00000	lb/ton	97.99%	0.00%	0.0000	0.0000	Not Applicable
No. 2 Q-BOP Caster	Fugitives (Roof Monitor)	717,167	molten steel	0.0000	lb/ton	95.00%	N/A	0.0000	0.0000	Source registration notification submitted April 1995

Table 3-17a
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE N0.13 RELINE
FUGITIVE EMISSION CALCULATION

NO_x

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
No. 1 BOP Shop	Gas Cleaning System (2 units)	0	molten steel	0.08	lb/ton	99.72%	0.0000	0.0000	Gas Cleaning System Factor
	Hot Metal Desulfurization Baghouse	0	hot metal	0.0024	lb/ton	98.50%	0.0000	0.0000	Hot Metal Desulf Factor
	CAS Bell Baghouse	0	molten steel	0.0000	lb/ton	94.99%	0.0000	0.0000	Not Applicable
	Flux Handling Baghouse	0	molten steel	0.0000	lb/ton	99.00%	0.0000	0.0000	Not Applicable
						Total Fugitives	0.000	0.000	
No. 2 Q-BOP Shop & LMF	Gas Cleaning System (2 units)	717,167	molten steel	0.08	lb/ton	99.72%	0.0803	0.0183	Gas Cleaning System Factor
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.0024	lb/ton	99.40%	0.0044	0.0010	Hot Metal Desulf Factor
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.003	lb/ton	94.99%	0.0180	0.0041	No. 1 Hot Fume Exhaust Factor
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.003	lb/ton	94.99%	0.0180	0.0041	No. 2 Hot Fume Exhaust Factor
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.00	lb/ton	95.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.003	lb/ton	97.99%	0.0072	0.0016	No.3 LMF Hot Fume Extracation Factor
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.00015	lb/ton	100.00%	0.0000	0.0000	RH Vacuum Degasser Factor
	LMF 3 Material Handling System	239,056	molten steel	0.00000	lb/ton	97.99%	0.0000	0.0000	Not Applicable
						Total Fugitives	0.1278	0.0292	

Table 3-18
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES

CO

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 13 Blast Furnace	Casthouse Fugitives	609,592	hot metal	0.000	lb/ton	99.80%	N/A	0.0000	0.0000	Not Applicable
	Casthouse Emission Control Baghouse	609,592	hot metal	0.000	lb/ton	99.80%	0.00%	0.0000	0.0000	Not Applicable
	Slag Pit Operations	152,398	slag	0.070	lb/ton	0.00%	0.00%	5.3530	1.2221	ISPAT Inland Permit Application
PCI	Coal Pulverizer Bldg.	91,439	coal	0.000	lb/ton	N/A	N/A	0.0000	0.0000	Not Applicable
No. 1 BOP Shop	Fugitives (Roof Monitor)					N/A	N/A	0.0000	0.0000	See CO Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	0	molten steel	138.00	lb/ton	99.72%	94.35%	0.0000	0.0000	AIRS, Carbon Balance and March 1996 Stack Test
	Hot Metal Desulfurization Baghouse	0	hot metal	0.00	lb/ton	98.50%	0.00%	0.0000	0.0000	Not Applicable
	Continuous Casting	0	molten steel	0.00	lb/ton	0.00%	0.00%	0.0000	0.0000	Not Applicable
	CAS Bell/OB Lancing Baghouse	0	molten steel	0.0000	lb/ton	94.99%	0.00%	0.0000	0.0000	Not Applicable
	Flux Handling Baghouse	0	molten steel	0.0000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
No. 1 BOP Caster	Fugitives (Roof Monitor)	0	molten steel	0.0000	lb/ton	0.00%	N/A	0.0000	0.0000	Not Applicable

Table 3-18
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES

CO

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 2 Q-BOP Shop LMF	Fugitives (Roof Monitor)					N/A	N/A	139.2756	31.7981	See CO Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	717,167	molten steel	138.00	lb/ton	99.72%	94.35%	2788.0473	636.5405	AIRS, Carbon Balance and March 1996 Stack Test
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.00	lb/ton	99.40%	0.00%	0.0000	0.0000	Not Applicable
	Continuous Casting	717,167	molten steel	0.00	lb/ton	95.00%	0.00%	0.0000	0.0000	Not Applicable
	Secondary Emissions Baghouse	717,167	molten steel	0.00	lb/ton	99.72%	0.00%	0.0000	0.0000	Not Applicable
	116' Elevation North and South Flux Handling System Baghouses	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	North Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	South Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Middle Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Day Tank Lime Silo Baghouse	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Lime Dump Station Baghouse	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.05	lb/ton	94.99%	0.00%	5.6770	1.2961	Inland Steel EAF Shop modifications construction permit application submitted March 1994
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.05	lb/ton	94.99%	0.00%	5.6770	1.2961	Inland Steel EAF Shop modifications construction permit application submitted March 1994
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.00	lb/ton	95.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.05	lb/ton	97.99%	0.00%	5.8563	1.3370	Inland Steel EAF Shop modifications construction permit application submitted March 1994
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.887	lb/ton	100.00%	0.00%	59.0676	13.4857	Weight percent of carbon in steel before and after degassing process. Assume all carbon removed during the degassing process is converted to CO.
	No. 3 LMF Material Handling System	239,056	molten steel	0.000	lb/ton	97.99%	0.00%	0.0000	0.0000	Not Applicable
No. 2 Q-BOP Caster	Fugitives (Roof Monitor)	717,167	molten steel	0.0000	lb/ton	95.00%	N/A	0.0000	0.0000	Source registration notification submitted April 1995

Table 3-18a
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
FUGITIVE EMISSION CALCULATION

CO

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
No. 1 BOP Shop	Gas Cleaning System (2 units)	0	molten steel	138.00	lb/ton	99.72%	0.0000	0.0000	Gas Cleaning System Factor
	Hot Metal Desulfurization Baghouse	0	hot metal	0.00	lb/ton	98.50%	0.0000	0.0000	Not Applicable
	CAS Bell Baghouse	0	molten steel	0.0000	lb/ton	94.99%	0.0000	0.0000	Not Applicable
	Flux Handling Baghouse	0	molten steel	0.0000	lb/ton	99.00%	0.0000	0.0000	Not Applicable
						Total Fugitives	0.000	0.000	
No. 2 Q-BOP Shop & LMF	Gas Cleaning System (2 units)	717,167	molten steel	138.00	lb/ton	99.72%	138.5567	31.6339	Gas Cleaning System Factor
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.00	lb/ton	99.40%	0.0000	0.0000	Not Applicable
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.05	lb/ton	94.99%	0.2994	0.0684	No.1 Hot Furme Exhaust Factor
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.05	lb/ton	94.99%	0.2994	0.0684	No.2 Hot Fumre Exhaust Factor
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.00	lb/ton	95.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.05	lb/ton	97.99%	0.1201	0.0274	No.3 LMF Hot Fume Extracation Factor
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.887	lb/ton	100.00%	0.00E+00	0.00E+00	RH Vacuum Degasser Factor
	LMF 3 Material Handling System	239,056	molten steel	0.000	lb/ton	97.99%	0.0000	0.0000	Not Applicable
						Total Fugitives	139.2756	31.7981	

Table 3-19
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
VOC

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 13 Blast Furnace	Casthouse Fugitives	609,592	hot metal	0.0000	lb/ton	99.80%	0.00%	0.0000	0.0000	Not Applicable
	Casthouse Emission Control Baghouse	609,592	hot metal	0.00000	lb/ton	99.80%	0.00%	0.0000	0.0000	Not Applicable
	Slag Pit Operations	152,398	slag	0.00134	lb/ton	0.00%	0.00%	0.1017	0.0232	ISPAT Inland Permit Application
PCI	Coal Pulverizer Bldg.	91,439	coal	0.000	lb/ton	N/A	N/A	0.0000	0.0000	Not Applicable
No. 1 BOP Shop	Fugitives (Roof Monitor)					N/A	N/A	0.0000	0.0000	See VOC Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	0	molten steel	0.002	lb/ton	99.72%	0.00%	0.0000	0.0000	AIRS
	Hot Metal Desulfurization Baghouse	0	hot metal	0.001	lb/ton	98.50%	0.00%	0.0000	0.0000	AIRS
	Continuous Casting	0	molten steel	0.000	lb/ton	0.00%	0.00%	0.0000	0.0000	Not Applicable
	CAS Bell/OB Lancing Baghouse	0	molten steel	0.00000	lb/ton	94.99%	0.00%	0.0000	0.0000	Source registration notification submitted April 1995
	Flux Handling Baghouse	0	molten steel	0.00000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
No. 1 BOP Caster	Fugitives (Roof Monitor)	0	molten steel	0.00000	lb/ton	0.00%	N/A	0.0000	0.0000	Not Applicable

Table 3-19
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM PROCESS SOURCES
VOC

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
No. 2 Q-BOP Shop LMF	Fugitives (Roof Monitor)					N/A	N/A	0.0038	0.0009	See VOC Fugitive Emission Calculation Table
	Gas Cleaning System (2 units)	717,167	molten steel	0.002	lb/ton	99.72%	0.00%	0.7152	0.1633	AIRS
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.001	lb/ton	99.40%	0.00%	0.3030	0.0692	AIRS
	Continuous Casting	717,167	molten steel	0.000	lb/ton	95.00%	0.00%	0.0000	0.0000	Not Applicable
	Secondary Emissions Baghouse	717,167	molten steel	0.000	lb/ton	99.72%	0.00%	0.0000	0.0000	Not Applicable
	116' Elevation North and South Flux Handling System Baghouses	717,167	molten steel	0.000	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	North Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	South Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Middle Roof Baghouse (166')	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Day Tank Lime Silo Baghouse	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	Lime Dump Station Baghouse	717,167	molten steel	0.00	lb/ton	99.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.000	lb/ton	94.99%	0.00%	0.0000	0.0000	Not Applicable
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.000	lb/ton	94.99%	0.00%	0.0000	0.0000	Not Applicable
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.000	lb/ton	95.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.000	lb/ton	97.99%	0.00%	0.0000	0.0000	Not Applicable
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.000	lb/ton	100.00%	0.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Material Handling System	239,056	molten steel	0.000	lb/ton	97.99%	0.00%	0.0000	0.0000	Not Applicable
No. 2 Q-BOP Caster	Fugitives (Roof Monitor)	717,167	molten steel	0.00000	lb/ton	95.00%	N/A	0.0000	0.0000	Not Applicable

* - See Table 5, Attachment 1

Table 3-19a
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
FUGITIVE EMISSION CALCULATION

VOC

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Annual Production/ Throughput Change	Units (tons)	Emission Factor	Units	Capture Efficiency	Annual Change in Emissions		Source of Emission Factor
							(tons/yr)	(lbs/hr)	
No. 1 BOP Shop	Gas Cleaning System (2 units)	0	molten steel	0.002	lb/ton	99.72%	0.0000	0.0000	Gas Cleaning System Factor
	Hot Metal Desulfurization Baghouse	0	hot metal	0.001	lb/ton	98.50%	0.0000	0.0000	Hot Metal Desulf Factor
	CAS Bell Baghouse	0	molten steel	0.00000	lb/ton	94.99%	0.0000	0.0000	Not Applicable
	Flux Handling Baghouse	0	molten steel	0.00000	lb/ton	99.00%	0.0000	0.0000	Not Applicable
						Total Fugitives	0.000	0.000	
No. 2 Q-BOP Shop & LMF	Gas Cleaning System (2 units)	717,167	molten steel	0.002	lb/ton	99.72%	0.0020	0.0005	Gas Cleaning System Factor
	Hot Metal Desulfurization Baghouse	609,592	hot metal	0.001	lb/ton	99.40%	0.0018	0.0004	Hot Metal Desulf Factor
	No. 1 Hot Fume Exhaust Baghouse	239,056	molten steel	0.000	lb/ton	94.99%	0.0000	0.0000	Not Applicable
	No. 2 Hot Fume Exhaust Baghouse	239,056	molten steel	0.000	lb/ton	94.99%	0.0000	0.0000	Not Applicable
	LMF 1 & 2 Material Handling System	478,111	molten steel	0.000	lb/ton	95.00%	0.0000	0.0000	Not Applicable
	No. 3 LMF Hot Fume Extracation Exhaust	239,056	molten steel	0.000	lb/ton	97.99%	0.0000	0.0000	Not Applicable
	RH Vacuum Degasser Slag Conditioning Baghouse	133,185	molten steel	0.000	lb/ton	100.00%	0.0000	0.0000	Not Applicable
	LMF 3 Material Handling System	239,056	molten steel	0.000	lb/ton	97.99%	0.0000	0.0000	Not Applicable
						Total Fugitives	0.0038	0.0009	Not Applicable

Table 3-20
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES

PM

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 13	Stoves (NG)	254	mmcf	7.60	lb/mmcf	100.00%	0.00%	0.967	0.2207	AP-42
	Stoves (BFG)	8,047	mmcf	2.90	lb/mmcf	100.00%	0.00%	11.667	2.6638	AIRS
						Total Stoves		12.634	2.885	
TBBH Boilers	TBBH Boilers (BFG)	22,433	mmcf	2.90	lb/mmcf	100.00%	0.00%	32.528	7.4265	AIRS
						Total Boiler House		32.528	7.426	

Table 3-21
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES

PM_{10}

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 13	Stoves (NG)	254	mmcf	7.60	lb/mmcf	100.00%	0.00%	0.967	0.2207	AP-42
	Stoves (BFG)	8,047	mmcf	0.96	lb/mmcf	100.00%	0.00%	3.862	0.8818	Oct. 11, 2001 - Stack Test on No. 6 Boiler (100% BFG)
						Total Stoves		4.829	1.1026	
TBBH Boilers	TBBH Boilers (BFG)	22,433	mmcf	0.96	lb/mmcf	100.00%	0.00%	10.768	2.4584	Oct. 11, 2001 - Stack Test on No. 6 Boiler (100% BFG)
						Total Boiler House		10.768	2.458	

Table 3-22
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES

SO_2

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 13	Stoves (NG)	254	mmcf	0.60	lb/mmcf	100.00%	0.00%	0.076	0.0174	AP-42 (1998)
	Stoves (BFG)	8,047	mmcf	6.39	lb/mmcf	100.00%	0.00%	25.709	5.8696	IDEM SO2 Quarterly Report
						Total Stoves		25.785	5.887	
TBBH Boilers	TBBH Boilers (BFG)	22,433	mmcf	6.39	lb/mmcf	100.00%	0.00%	71.674	16.3638	IDEM SO2 Quarterly Report
						Total Boiler House		71.674	16.364	

Table 3-23
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES

NO_x

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 13	Stoves (NG)	254	mmcf	280.00	lb/mmcf	100.00%	0.00%	35.620	8.1325	AP-42 (1998)
	Stoves (BFG)	8,047	mmcf	0.61	lb/mmcf	100.00%	0.00%	2.454	0.5603	RATA Testing on Jan 2004
						Total Stoves		38.074	8.693	
TBBH Boilers	TBBH Boilers (BFG)	22,433	mmcf	0.61	lb/mmcf	100.00%	0.00%	6.842	1.5621	RATA Testing on Jan 2004
						Total Boiler House		6.84	1.56	

Table 3-24
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES

CO

All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 13	Stoves (NG)	254	mmcf	84.00	lb/mmcf	100.00%	0.00%	10.686	2.4397	AP-42 (1998)
	Stoves (BFG)	8,047	mmcf	26.50	lb/mmcf	100.00%	0.00%	106.617	24.3417	Stack tests at TBBH No. 4
						Total Stoves		117.303	26.781	
TBBH Boilers	TBBH Boilers (BFG)	22,433	mmcf	26.50	lb/mmcf	100.00%	0.00%	297.238	67.8626	Stack tests at TBBH No. 4
						Total Boiler House		297.238	67.863	

Table 3-25
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
BLAST FURNACE NO.13 RELINE
CHANGE IN EMISSION RATES FROM COMBUSTION SOURCES

VOC

Emission Unit	Emission Location	Throughput Change	Units	Emission Factor	Units	Capture Efficiency	Control Efficiency	Annual Change in Emissions		Source of Emission Factor
								(tons/yr)	(lbs/hr)	
Blast Furnace No. 13	Stoves (NG)	254	mmcf	5.50	lb/mmcf	100.00%	0.00%	0.700	0.1597	AP-42 (1998)
	Stoves (BFG)	8,047	mmcf	0.00	lb/mmcf	100.00%	0.00%	0.000	0.0000	AIRS
						Total Stoves		0.700	0.160	
TBBH Boilers	TBBH Boilers (BFG)	22,433	mmcf	0.00	lb/mmcf	100.00%	0.00%	0.000	0.0000	AIRS
						Total Boiler House		0.000	0.000	

TABLE 3-26
US STEEL GARY WORKS
CONTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE

Hazardous Air Pollutant	Change in Emission Rates (tons/yr)	
	Case I [1]	Case II [1]
2,4-Dinitrotoluene	4.72E-05	4.72E-05
2-Chloroacetophenone	1.10E-03	1.10E-03
Acetaldehyde	8.96E-02	8.96E-02
Acetophenone	2.36E-03	2.36E-03
Acrolein	4.57E-02	4.57E-02
Antimony	3.35E-03	3.63E-03
Arsenic	3.17E-04	6.36E-04
Benzene	2.04E-01	2.04E-01
Benzyl Chloride	1.10E-01	1.10E-01
Beryllium	1.53E-06	1.53E-06
Bromoform	6.13E-03	6.13E-03
Cadmium	4.01E-04	2.71E-03
Carbon Disulfide	2.04E-02	2.04E-02
Carbonyl Sulfide	1.49E-01	1.49E-01
Chlorobenzene	3.46E-03	3.46E-03
Chloroform	9.28E-03	9.28E-03
Chromium	8.31E-03	1.35E-02
Cobalt	6.77E-05	1.11E-04
Cumene	8.35E-04	8.35E-04
Cyanide	3.93E-01	3.93E-01
DEHP	1.15E-02	1.15E-02
Dichlorobenzene	1.53E-04	1.53E-04
Dimethyl Sulfate	7.56E-03	7.56E-03
Ethelyne Dibromide	1.86E-04	1.86E-04
Ethelyne Dichloride	6.29E-03	6.29E-03
Ethyl Chloride	6.61E-03	6.61E-03
Ethylbenzene	1.48E-02	1.48E-02
Formaldehyde	4.73E-02	4.73E-02
HCN	4.18E-02	4.18E-02
Hexane	2.40E-01	2.40E-01
Isophorone	9.13E-02	9.13E-02
Lead	2.03E-02	5.32E-02
Manganese	2.59E-01	5.62E-01
Mercury	3.33E-05	4.46E-05
Methyl Bromide	2.51E-02	2.51E-02
Methyl Chloride	8.34E-02	8.34E-02
Methyl Chloroform (1,1,1-Trichloroethane)	2.27E-03	2.27E-03
Methyl Ethyl Ketone (MEK)	6.14E-02	6.14E-02
Methyl Methacryalate	3.14E-03	3.14E-03
Methyl tert butyl ether	5.50E-03	5.50E-03
Methylene Chloride	4.57E-02	4.57E-02
Methylhydrazine	2.68E-02	2.68E-02
Naphthalene	7.21E-01	7.21E-01
Nickel	2.67E-04	8.83E-04
Phenol	2.51E-03	2.51E-03
POM	5.07E-05	5.07E-05
Propionaldehyde	5.97E-02	5.97E-02
Quinoline	2.50E-06	2.50E-06
Selenium	2.47E-04	2.38E-04
Styrene	3.93E-03	3.93E-03
Tetrachloroethylene	6.77E-03	6.77E-03
Toluene	3.82E-02	3.82E-02
Vinyl Acetate	1.19E-03	1.19E-03
Xylene	5.82E-03	5.82E-03
TOTAL (tons/yr)	2.8880	3.2327

(1) Assume all additional hot metal produced at No. 13 Blast Furnace is processed through:
Case I - No. 1 BOP Shop
Case II - No. 2 Q-BOP Shop

TABLE 4-1
U.S. STEEL – GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION

Estimated Increases in Emissions of Relevant Regulated Air Pollutants Compared to Significant Emissions (Major Source Modification) Thresholds

Pollutant	Estimated Emissions Increases tons/yr		Significant Emissions Thresholds tons/yr
	Case I[(1)]	Case II[(1)]	
Particulate Matter (PM)	89	91	N/A
Particulate Matter (PM_{10})	46	77	15
Sulfur Dioxide (SO_2)	209	209	40
Oxides of Nitrogen (NO_x)	83	83	40
Carbon Monoxide (CO)	3,346	3,346	100
Volatile Organic Compounds (VOC)	1.82	1.82	15.44[(2)]
Lead (Pb)	0.02	0.05	0.6
Hydrogen Sulfide (H_2S)	7.7	7.7	10
Fluorides (F)	2.7	2.7	3
Beryllium (Be)	<0.0001	<0.0001	0.0004
Mercury (Hg)	<0.0001	<0.0001	0.1
Individual HAP	0.72	0.72	10
Total HAPs	2.9	3.2	25

(1) Assumes all additional hot metal produced at No. 13 Blast Furnace is processed through:

Case I – No. 1 BOP Shop
Case II – No. 2 Q-BOP Shop

(2) Remainder in the USS-Gary Works VOC Diminimis Account prior to the No. 13 Blast Furnace Reline Project (total of all previous increases) in calendar years 2000 through 2004 to date. Total increases including this project is less than 25 tons VOC/yr major source modification threshold in severe ozone non-attainment area

TABLE 6-1

U.S. STEEL – GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
NAAQS, ALLOWABLE PSD INCREMENTS, AND SIGNIFICANT IMPACT LEVELS

Pollutant	Averaging Period	NAAQS[1] Standard (ug/m^3)	Allowable[2] PSD Increment (ug/m^3)	Significant[4] Impact Level (ug/m^3)
Nitrogen Dioxide (NO_2)	Annual	100	25	1
Carbon Monoxide (CO)	1-hour	40,000[3]	--	2,000
	8-hour	10,000[3]	--	500
Particulate Matter (PM_{10})	24-hour	150[3]	30	5
	Annual	50	17	1
Sulfur Dioxide (SO_2)	3-hour	1,300[3]	512	25
	24-hour	365[3]	91	5
	Annual	80	20	1

[1] 40 CFR 50
[2] Class II PSD Increments, 40 CFR 52.166
[3] May be exceeded once a year
[4] 40 CFR 51.165

TABLE 6-2
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Modeled Parameters for Point Sources

Description	UTM Coordinates (m)		Elevation (m)	Stack Ht. (m)	Temperature (Deg K)	Exit Vel. (m/s)	Stack Dia. (m)
	X	Y					
Blast Furnace No. 13 Stoves Stack	472713	4607465	179.8	75.8	325	6.23	4.72
Blast Furnace No. 13 Casthouse Baghouse Stack	472640	4607616	182.9	50.1	339	22.49	3.96
#1 BOP Gas Cleaning System Stack	472192	4606491	179.8	46.4	336	17.21	3.35
#2 Q-BOP Gas Cleaning System Stack	472313	4607298	179.8	57.9	322	12.01	3.66
#2 Q-BOP LMF #1 Hot Fume Exhaust Baghouse Stack	472444	4607590	182.9	13.2	339	5.15	0.91
#2 Q-BOP LMF #2 Hot Fume Exhaust Baghouse Stack	472304	4607416	182.9	13.2	339	5.15	0.91
#2 Q-BOP LMF #3 Hot Fume Exhaust/Material Handling Baghouse Stack	472275	4607372	179.8	12.1	339	3.72	3.26
#2 Q-BOP RH-Degasser Slag Conditioning Baghouse Stack	472440	4607593	182.9	13.2	325	5.16	0.91
Turboblower Boiler House Boiler Nos. 1,2,3 and 5	472662	4606904	179.8	45.7	445	8.12	3.81
Turboblower Boiler House Boiler No. 6	472652	4606850	179.8	45.7	445	15.78	3.05

TABLE 6-3
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Modeled Parameters for Volume Sources

Description	UTM Coordinates (m)		Elevation (m)	Release Ht. (m)	Init. Lat. Dim. (m)	Init. Vert. Dim. (m)
	X	Y				
Blast Furnace No. 13 Slag Pit	472664	4607542	181.5	9.14	2.22	4.25
Blast Furnace No. 13 Casthouse Fugitives (1)	472711	4607478	179.8	34.40	6.40	16.00
Blast Furnace No. 13 Casthouse Fugitives (2)	472713	4607461	179.8	34.40	6.40	16.00
#1 BOP Fugitives (1)	472292	4606519	179.8	52.30	31.90	24.70
#1 BOP Fugitives (2)	472248	4606461	179.8	52.30	31.90	24.70
#1 BOP Hot Metal Desulfurization Baghouse (1)	472280	4606492	181.5	14.20	10.50	6.60
#1 BOP Hot Metal Desulfurization Baghouse (2)	472290	4606492	181.5	14.20	10.50	6.60
#1 BOP Hot Metal Desulfurization Fugitives	472459	4606732	179.8	19.10	5.81	8.88
#2 Q-BOP Fugitives	472410	4607395	179.8	52.90	41.70	26.00
#2 Q-BOP Hot Metal Desulfurization Baghouse	472522	4607455	181.5	16.80	4.30	7.80
#2 Q-BOP Hot Metal Desulfurization Fugitives	472488	4607414	179.8	21.94	7.09	10.20
No. 2 Caster A Line (1)	472295	4607563	182.5	20.80	6.00	9.70
No. 2 Caster A Line (2)	472301	4607560	182.5	20.80	6.00	9.70
No. 2 Caster A Line (3)	472307	4607556	182.5	20.80	6.00	9.70
No. 2 Caster A Line (4)	472313	4607553	182.5	20.80	6.00	9.70
No. 2 Caster A Line (5)	472319	4607549	182.5	20.80	6.00	9.70
No. 2 Caster A Line (6)	472325	4607545	182.5	20.80	6.00	9.70
No. 2 Caster B Line (1)	472267	4607562	182.5	20.80	6.20	9.70
No. 2 Caster B Line (2)	472274	4607557	182.5	20.80	6.20	9.70
No. 2 Caster B Line (4)	472285	4607547	182.5	20.80	6.20	9.70
No. 2 Caster B Line (7)	472303	4607532	182.5	20.80	6.20	9.70
No. 2 Caster B Line (8)	472309	4607527	182.5	20.80	6.20	9.70
No. 2 Caster B Line(3)	472279	4607552	182.5	20.80	6.20	9.70
No. 2 Caster B Line(5)	472291	4607542	182.5	20.80	6.20	9.70
No. 2 Caster B Line(6)	472297	4607537	182.5	20.80	6.20	9.70
No. 2 Caster C Line (1)	472251	4607540	182.5	20.80	6.20	9.70
No. 2 Caster C Line (2)	472256	4607535	182.5	20.80	6.20	9.70

TABLE 6-3
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Modeled Parameters for Volume Sources

Description	UTM Coordinates (m)		Elevation (m)	Release Ht. (m)	Init. Lat. Dim. (m)	Init. Vert. Dim. (m)
	X	Y				
No. 2 Caster C Line (3)	472262	4607530	182.5	20.80	6.20	9.70
No. 2 Caster C Line (4)	472268	4607525	182.5	20.80	6.20	9.70
No. 2 Caster C Line (5)	472274	4607520	182.5	20.80	6.20	9.70
No. 2 Caster C Line (6)	472280	4607515	182.5	20.80	6.20	9.70
No. 2 Caster C Line (7)	472286	4607510	182.5	20.80	6.20	9.70
No. 2 Caster C Line (8)	472292	4607505	182.5	20.80	6.20	9.70

TABLE 6-4A
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Modeled PM_{10} Emission Rate Increases for Level 2 Modeling

Description	Modeled PM_{10} Emission Rate (lb/hr)	
	10,000 Tons of Hot Metal Per Day Processed Through No. 1 BOP Shop (lb/hr)	10,000 Tons of Hot Metal Per Day Processed Through No. 2 Q-BOP Shop (lb/hr)
Point Sources		
Blast Furnace No. 13 Stoves Stack	1.1025	1.1025
Volume Sources		
Blast Furnace No. 13 Slag Pit	0.7394	0.7394
Blast Furnace No. 13 Casthouse Fugitives (1)	0.0064	0.0064
Blast Furnace No. 13 Casthouse Fugitives (2)	0.0064	0.0064
#1 BOP Fugitives (1)	1.0656	NA
#1 BOP Fugitives (2)	1.0656	NA
#2 Q-BOP Fugitives	NA	1.8975
No. 2 Caster A Line (1)	NA	0.00023
No. 2 Caster A Line (2)	NA	0.00023
No. 2 Caster A Line (3)	NA	0.00023
No. 2 Caster A Line (4)	NA	0.00023
No. 2 Caster A Line (5)	NA	0.00023
No. 2 Caster A Line (6)	NA	0.00023
No. 2 Caster B Line (1)	NA	0.00023
No. 2 Caster B Line (2)	NA	0.00023
No. 2 Caster B Line (4)	NA	0.00023
No. 2 Caster B Line (7)	NA	0.00023
No. 2 Caster B Line (8)	NA	0.00023
No. 2 Caster B Line(3)	NA	0.00023
No. 2 Caster B Line(5)	NA	0.00023
No. 2 Caster B Line(6)	NA	0.00023
No. 2 Caster C Line (1)	NA	0.00023
No. 2 Caster C Line (2)	NA	0.00023
No. 2 Caster C Line (3)	NA	0.00023
No. 2 Caster C Line (4)	NA	0.00023
No. 2 Caster C Line (5)	NA	0.00023
No. 2 Caster C Line (6)	NA	0.00023
No. 2 Caster C Line (7)	NA	0.00023
No. 2 Caster C Line (8)	NA	0.00023

TABLE 6-4B
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Modeled Oxides of Nitrogen Emission Rates for Level 2 Modeling

Description	Modeled NOx Emission Rate (lb/hr)	
	10,000 Tons of Hot Metal Per Day Processed Through No. 1 BOP Shop (lb/hr)	10,000 Tons of Hot Metal Per Day Processed Through No. 2 Q-BOP Shop (lb/hr)
Point Sources		
Blast Furnace No. 13 Stoves Stack	8.6928	8.6928
Blast Furnace No. 13 Casthouse Baghouse Stack	1.7223	1.7223
#1 BOP Gas Cleaning System Stack	6.5311	NA
#2 Q-BOP Gas Cleaning System Stack	NA	6.5311
#2 Q-BOP LMF #1 Hot Fume Exhaust Baghouse Stack	NA	0.0778
#2 Q-BOP LMF #2 Hot Fume Exhaust Baghouse Stack	NA	0.0778
#2 Q-BOP LMF #3 Hot Fume Exhaust/Material Handling Baghouse Stack	NA	0.0802
#2 Q-BOP RH-Degasser Slag Conditioning Baghouse Stack	NA	0.0023
Turboblower Boiler House Boiler Nos. 1,2,3 and 5	1.0901	1.0901
Turboblower Boiler House Boiler No. 6	0.4720	0.4720
Volume Sources		
Blast Furnace No. 13 Slag Pit	0.2383	0.2383
Blast Furnace No. 13 Casthouse Fugitives (1)	0.0018	0.0018
Blast Furnace No. 13 Casthouse Fugitives (2)	0.0018	0.0018
#1 BOP Fugitives (1)	0.0092	NA
#1 BOP Fugitives (2)	0.0092	NA
#1 BOP Hot Metal Desulfurization Baghouse (1)	0.0823	NA
#1 BOP Hot Metal Desulfurization Baghouse (2)	0.0823	NA
#1 BOP Hot Metal Desulfurization Fugitives	0.0025	NA
#2 Q-BOP Fugitives	NA	0.0281
#2 Q-BOP Hot Metal Desulfurization Baghouse	NA	0.1660
#2 Q-BOP Hot Metal Desulfurization Fugitives	NA	0.0010

TABLE 6-4C
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Modeled Carbon Monoxide Emission Rates for Level 2 Modeling

Description	Modeled CO Emission Rate (lb/hr)	
	10,000 Tons of Hot Metal Per Day Processed Through No. 1 BOP Shop (lb/hr)	10,000 Tons of Hot Metal Per Day Processed Through No. 2 Q-BOP Shop (lb/hr)
Point Sources		
Blast Furnace No. 13 Stoves Stack	26.7814	26.7814
#1 BOP Gas Cleaning System Stack	636.5405	NA
#2 Q-BOP Gas Cleaning System Stack	NA	636.5405
#2 Q-BOP LMF #1 Hot Fume Exhaust Baghouse Stack	NA	1.2961
#2 Q-BOP LMF #2 Hot Fume Exhaust Baghouse Stack	NA	1.2961
#2 Q-BOP LMF #3 Hot Fume Exhaust/Material Handling Baghouse Stack	NA	1.3370
#2 Q-BOP RH-Degasser Slag Conditioning Baghouse Stack	NA	13.4857
Turboblower Boiler House Boiler Nos. 1,2,3 and 5	47.3613	47.3613
Turboblower Boiler House Boiler No. 6	20.5013	20.5013
Volume Sources		
Blast Furnace No. 13 Slag Pit	1.2221	1.2221
#1 BOP Fugitives (1)	15.8170	NA
#1 BOP Fugitives (2)	15.8170	NA
#2 Q-BOP Fugitives	NA	31.7981

TABLE 6-5A
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Results of PM_{10} Level 2 Air Dispersion Modeling

Scenario	Meteorological Data Year	Maximum Predicted Concentration (micrograms/cu. meter)		Significant Impact Levels (micrograms/cu. meter)	
		24-Hr Avg.	Annual	24-Hr Avg.	Annual
10,000 tons Hot Metal per Day Processed Through No. 1 BOP Shop	1991	2.79	0.36	5	1
	1992	3.82	0.32		
	1993	3.23	0.36		
	1994	2.83	0.35		
	1995	3.68	0.30		
10,000 tons Hot Metal per Day Processed Through No. 2 Q-BOP Shop	1991	3.16	0.44		
	1992	3.75	0.38		
	1993	3.33	0.43		
	1994	3.13	0.40		
	1995	3.74	0.37		
Maximum		3.82	0.44		

TABLE 6-5B
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Results of Oxides of Nitrogen Level 2 Air Dispersion Modeling

Scenario	Meteorological Data Year	Maximum Predicted Concentration (micrograms/cu. meter)	Significant Impact Levels (micrograms/cu. meter)
		Annual	Annual
10,000 tons Hot Metal per Day Processed Through No. 1 BOP Shop	1991	0.40	1
	1992	0.32	
	1993	0.34	
	1994	0.43	
	1995	0.29	
10,000 tons Hot Metal per Day Processed Through No. 2 Q-BOP Shop	1991	0.49	
	1992	0.37	
	1993	0.42	
	1994	0.43	
	1995	0.36	
Maximum		0.49	

TABLE 6-5C
U.S. STEEL-GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
Resutls of Carbon Monoxide Level 2 Air Dispersion Modeling

Scenario	Meteorological Data Year	Maximum Predicted Concentration (micrograms/cu. meter)		Significant Impact Levels (micrograms/cu. meter)	
		8-Hr Avg.	1-Hr Avg.	8-Hr Avg.	1-Hr Avg.
10,000 tons Hot Metal per Day Processed Through No. 1 BOP Shop	1991	188.04	523.03	500	2000
	1992	187.68	532.70		
	1993	175.63	531.16		
	1994	179.63	505.35		
	1995	196.13	521.95		
10,000 tons Hot Metal per Day Processed Through No. 2 Q-BOP Shop	1991	240.86	554.84		
	1992	189.07	527.47		
	1993	194.63	585.95		
	1994	195.82	522.19		
	1995	189.74	546.56		
Maximum		240.86	585.95		

TABLE 8-1
U.S. STEEL - GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION

Typical Destruction Efficiencies
For Various CO Control Technologies[1]

Control Technology	Typical Control Efficiencies
Combustion in Blast Furnace Stove or Boiler	98+%
Thermal Oxidizer w/Heat Exchanger (Recuperative)	98+%
Flare	98+%
NOTE: [1]From Air Pollution Technology Fact Sheet, CATC	

TABLE 8-2
U.S. STEEL - GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION

BACT/LAER Clearinghouse Listing for Iron and Steel Making Permits
Available Control Technologies for Carbon Monoxide

Date	Facility Name	State	Process	Add-on Description	CO Emission Limit	Basis
Jan 2003	Ispat-Inland, Inc.	IN	Blast Furnace	Burn gas in Blast Furnace Stove	None	BACT-PSD
Dec 2000	Acme Steel Company	IL	Blast Furnace	Burn gas in Blast Furnace Stove	None	Non-PSD
Dec 2000	Acme Steel Company	IL	Blast Furnace	Gas Flare*	None	Non-PSD
Aug 1999	Steel Dynamics, Inc.	IN	Rotary Health Furnace (Natural Gas)	Afterburner*	1.4 lb/ton iron	BACT-PSD
Jul 1999	Steel Dynamics, Inc.	IN	Electric Arc Furnace	Thermal Oxidation at DEC Air Gap*	400 lb/hr (2 lb/ton iron)	BACT-PSD
Mar 1998	Steel Dynamics, Inc.	IN	Submerged Arc Furnace	Thermal Oxidation*	1.26 lb/ton iron	BACT-PSD

*These systems do not provide beneficial recovery of heat energy.

TABLE 8-3
U.S. STEEL - GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION

Spray Dryer Absorption Process
Estimated Cost per Ton of SO_2 Abated

(Estimated Capital Cost is $500,000)

Annualized Capital Cost – 15 yrs @4%	$53,333
Cost of Lime Injectant	$876,000
Cost of Additional Electric Power	$49,336
Cost of Additional Baghouse Dust Disposal @ $125/Ton	$1,095,000
Maintenance Cost 5% of Capital	$25,000
Total Annualized Cost	$2,098,670
Maximum Future SO_2 Emissions Tons/Yr	504
Estimated Control Efficiency	40.0%
Estimated Tons of SO_2 Abated	201
Cost per Ton of SO_2 Abated	$10,441

TABLE 8-4
U.S. STEEL - GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION

Estimated Cost Comparison of Polyester and Gortex Bags

	Polyester	Gortex®
Total Number of Bags	5,472	5,472
Cost Per Bag	$14	$30
Total Cost of 1 Set of Bags	$76,608	$164,160
Life of Bags (Years)	5	6
Annualized Cost of 1 Set of Bags	$15,322	$27,360
Guaranteed Maximum Discharge (grains/acf)	0.005	0.001
Average Flow Rate (acfm)	586,900	580,699
Maximum Future PM_{10} Emissions Tons/Yr	110	22
Annualized Cost per Ton of PM_{10} Abated		$137

TABLE 8-5
U.S. STEEL GARY WORKS
NO. 13 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION

Effects of Slag Granulation on Emissions of Pollutants

Emission Factors (Lbs. per Ton of Slag)

Pollutants	Without Slag Granulation	With 100% Slag Granulation	With 75% Slag Granulation	Emission Reduction Efficiency at 75% Slag Granulation
PM_{10}	0.0680	0.0340	0.0427	37.21%
SO_2	0.3400	0.1000	0.1594	53.12%
NO_x	0.248	0.0100	0.0138	44.35%

CONSTRUCTION PERMIT APPLICATION
RELINE OF NO. 13 BLAST FURNACE
U.S. STEEL – GARY WORKS
PLANT ID NO. 089-00121

FIGURES

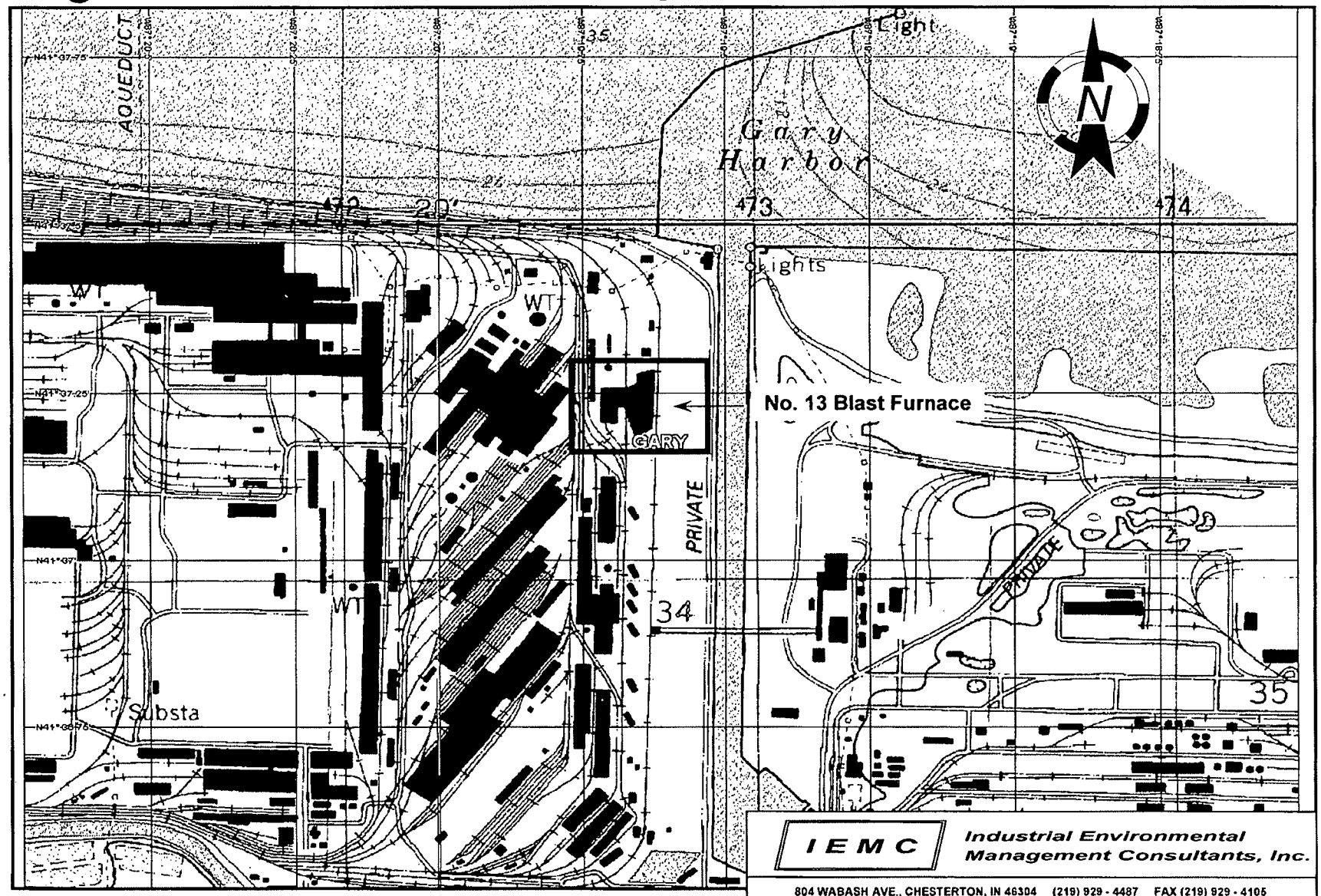


Figure 1 - 1

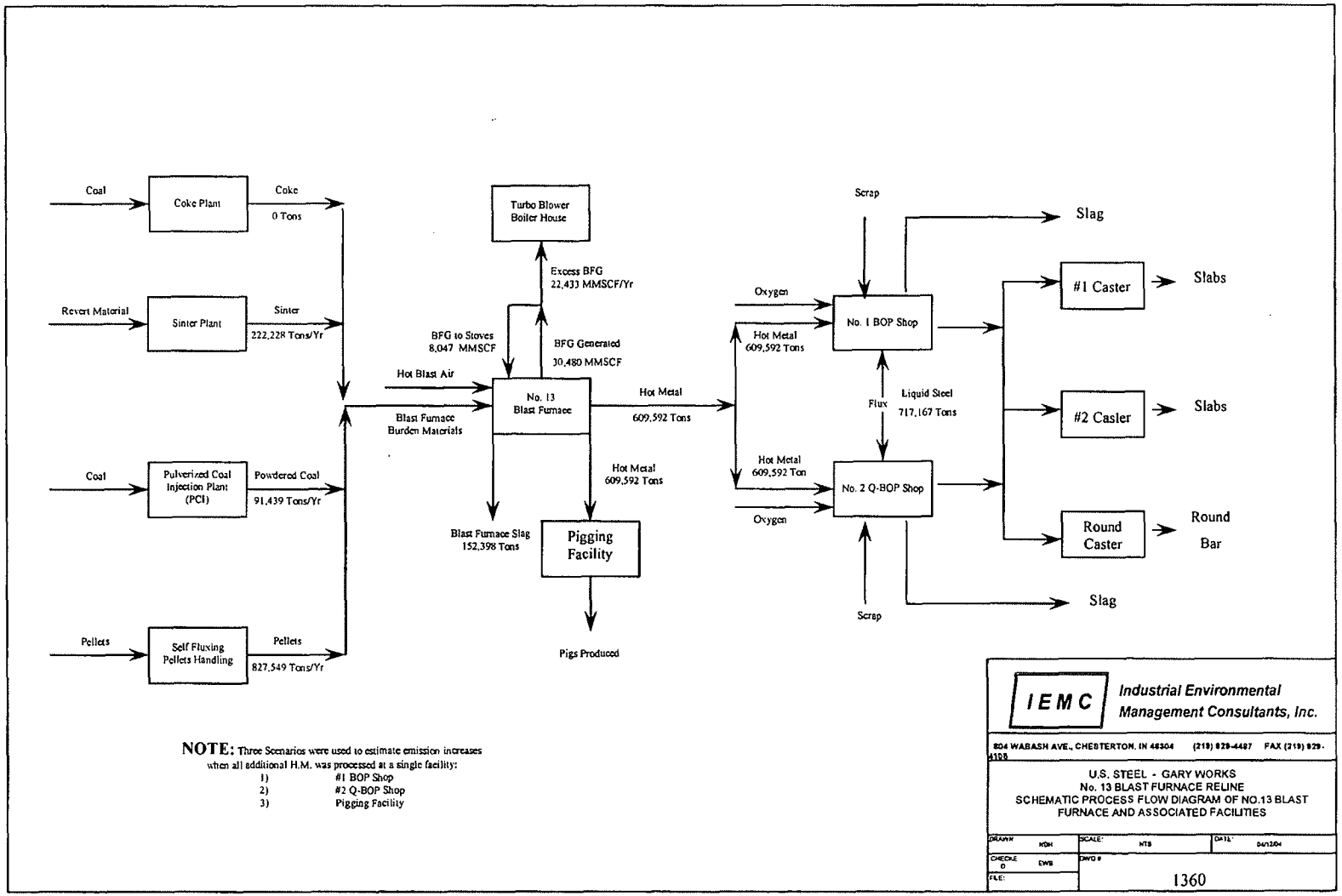
IEMC Industrial Environmental Management Consultants, Inc.

804 WABASH AVE., CHESTERTON, IN 46304 (219) 929 - 4487 FAX (219) 929 - 4105

U. S. STEEL - GARY WORKS
MAP SHOWING LOCATION OF
NO. 13 BLAST FURNACE FACILITY

DRAWN: NDH	SCALE: NTS	DATE: 08/19/04	
CHECKED: EWB	DWG #: 1359		
FILE: USSG04026			

Figure 2-1



NOTE: Three Scenarios were used to estimate emission increases when all additional H.M. was processed at a single facility:

1) #1 BOP Shop
2) #2 Q-BOP Shop
3) Pigging Facility

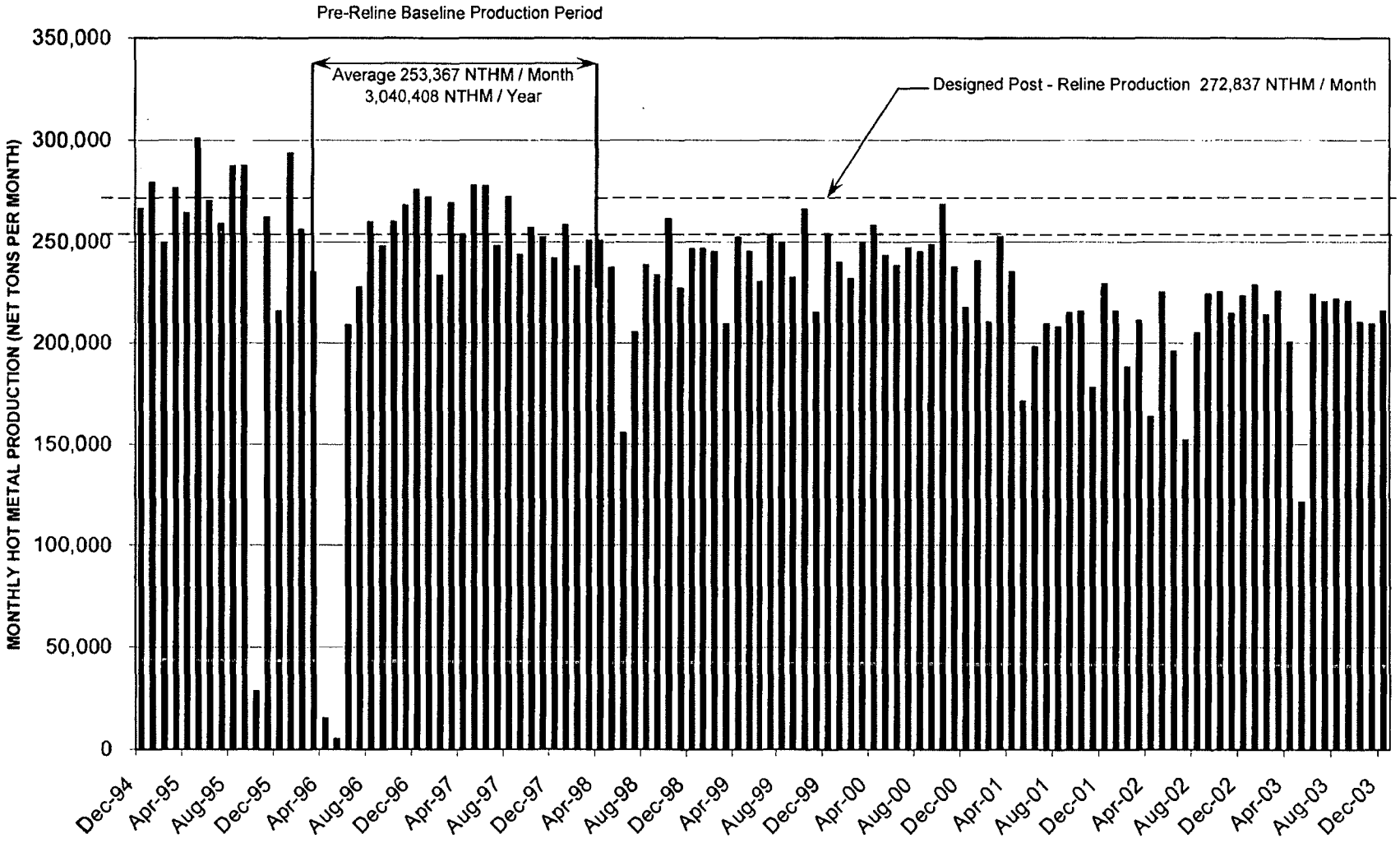
IEMC *Industrial Environmental Management Consultants, Inc.*

804 WABASH AVE., CHESTERTON, IN 46304 (219) 929-4487 FAX (219) 929-4108

U.S. STEEL - GARY WORKS
No. 13 BLAST FURNACE RELINE
SCHEMATIC PROCESS FLOW DIAGRAM OF NO.13 BLAST FURNACE AND ASSOCIATED FACILITIES

DRAWN	MDH	SCALE:	NTS	DATE:	04/12/04
CHECKED	EWB	DWG #			
FILE:			1360		

FIGURE 3 - 1
U.S. STEEL - GARY WORKS
NO. 13 BLAST FURNACE RELINE PERMIT
MONTHLY HOT METAL PRODUCTION 1995 THROUGH 2003



CONSTRUCTION PERMIT APPLICATION
RELINE OF NO. 13 BLAST FURNACE
U.S. STEEL – GARY WORKS
PLANT ID NO. 089-00121

APPENDIX 3-1

CONSTRUCTION PERMIT APPLICATION
RELINE OF NO. 13 BLAST FURNACE
U.S. STEEL – GARY WORKS
PLANT ID NO. 089-00121

APPENDIX 3-1

US STEEL GARY WORKS
CONTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CHANGE IN HAZARDOUS AIR POLLUTANTS EMISSION RATE

Source Description	Case I	Case II
	Change in Emission Rate (tons/yr)	Change in Emission Rate (tons/yr)
No. 13 Blast Furnace Casthouse Baghouse	2.40E-02	2.40E-02
No. 13 Blast Furnace Stoves (BFG)	6.54E-01	6.54E-01
No. 13 Blast Furnace Stoves (NG)	2.40E-01	2.40E-01
TBBH Boilers (BFG)	1.82E+00	1.82E+00
No. 1 BOP HM Desulfurization Baghouse	1.81E-02	0.00E+00
No. 1 BOP Gas Cleaner	9.63E-02	0.00E+00
No. 1 BOP CAS Bell/OB Lancing Baghouse	3.21E-02	0.00E+00
No. 2 Caster Mold Baghouses	0.00E+00	2.45E-04
No. 2 QBOP HM Desulfurization Baghouse	0.00E+00	1.17E-02
No. 2 QBOP Secondary Emissions Baghouse	0.00E+00	4.35E-02
No. 2 QBOP Gas Cleaner	0.00E+00	2.33E-01
No. 1 LMF Fume Exhaust Baghouse	0.00E+00	8.11E-02
No. 2 LMF Fume Exhaust Baghouse	0.00E+00	8.11E-02
No. 3 LMF Fume Exhaust/Mat. Handling Baghouse	0.00E+00	4.03E-02
TOTAL HAPs (tons/yr)	**2.8880**	**3.2327**

Table A3 - A
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Iron Producing
Emission Location: No. 13 Blast Furnace Casthouse Baghouse

Change in PM_{10} Emission Rate (tons/yr)	5.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.001200%	0.00006	0.00001
Arsenic	0.001120%	0.00006	0.00001
Chromium	0.025600%	0.00128	0.00029
Lead	0.005300%	0.00026	0.00006
Manganese	0.441000%	0.02204	0.00503
Selenium	0.004400%	0.00022	0.00005
POM	0.000790%	0.00004	0.00001
Quinoline	0.000050%	0.00000	0.00000
	Totals	0.02396	0.00547

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Table A3 - C
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM COMBUSTION SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: No. 13 Blast Furnace
Emission Location: Stoves (BFG)

Change in Blast Furnace Gas Consumption (MMSCF/yr)	8,047

Hazardous Air Pollutant	Emission Factor (lb/MMSCF)[1]	Change in HAP Emission Rate	
		(tons/yr)	(lbs/hr)
Non-POM HAPs			
Acetaldehyde	5.88E-03	2.37E-02	5.40E-03
Acetophenone	1.55E-04	6.24E-04	1.42E-04
Acrolein	3.00E-03	1.21E-02	2.76E-03
Benzene	1.34E-02	5.39E-02	1.23E-02
Benzyl Chloride	7.23E-03	2.91E-02	6.64E-03
DEHP	7.54E-04	3.03E-03	6.93E-04
Bromoform	4.02E-04	1.62E-03	3.69E-04
Carbon Disulfide	1.34E-03	5.39E-03	1.23E-03
Carbonyl Sulfide	9.78E-03	3.93E-02	8.98E-03
2-Chloroacetophenone	7.25E-05	2.92E-04	6.66E-05
Chlorobenzene	2.27E-04	9.13E-04	2.09E-04
Chloroform	6.09E-04	2.45E-03	5.59E-04
Cumene	5.48E-05	2.20E-04	5.03E-05
Dimethyl Sulfate	4.96E-04	2.00E-03	4.56E-04
2,4-Dinitrotoluene	3.10E-06	1.25E-05	2.85E-06
Ethylbenzene	9.71E-04	3.91E-03	8.92E-04
Ethyl Chloride	4.34E-04	1.75E-03	3.99E-04
Ethelyne Dibromide	1.22E-05	4.91E-05	1.12E-05
Ethelyne Dichloride	4.13E-04	1.66E-03	3.79E-04
Formaldehyde	2.48E-03	9.98E-03	2.28E-03
Hexane	6.92E-04	2.78E-03	6.36E-04
Isophorone	5.99E-03	2.41E-02	5.50E-03
Methyl Bromide	1.65E-03	6.64E-03	1.52E-03
Methyl Chloride	5.47E-03	2.20E-02	5.02E-03
Methyl Chloroform (1,1,1-Trichloroethane)	1.49E-04	5.99E-04	1.37E-04
Methyl Ethyl Ketone (MEK)	4.03E-03	1.62E-02	3.70E-03
Methylhydrazine	1.76E-03	7.08E-03	1.62E-03
Methyl Methacrylate	2.06E-04	8.29E-04	1.89E-04
Methyl tert butyl ether	3.61E-04	1.45E-03	3.32E-04
Methylene Chloride	3.00E-03	1.21E-02	2.76E-03
Naphthalene	4.73E-02	1.90E-01	4.34E-02
Phenol	1.65E-04	6.64E-04	1.52E-04
Propionaldehyde	3.92E-03	1.58E-02	3.60E-03
Styrene	2.58E-04	1.04E-03	2.37E-04
Tetrachloroethylene	4.44E-04	1.79E-03	4.08E-04
Toluene	2.48E-03	9.98E-03	2.28E-03
Vinyl Acetate	7.83E-05	3.15E-04	7.19E-05
Xylene	3.82E-04	1.54E-03	3.51E-04
Subtotal of Non-POMs HAPs		*5.07E-01*	*1.16E-01*
Metallic HAPs			
Antimony	2.00E-04	8.05E-04	1.84E-04
Cadmium	5.60E-06	2.25E-05	5.14E-06
Chromium	9.61E-05	3.87E-04	8.83E-05
Cyanide	2.58E-02	1.04E-01	2.37E-02
HCN	2.74E-03	1.10E-02	2.52E-03
Lead	6.70E-05	2.70E-04	6.15E-05
Manganese	7.60E-03	3.06E-02	6.98E-03
Subtotal Metallic HAPs		*1.47E-01*	*3.35E-02*
	Totals	**6.54E-01**	**1.49E-01**

[1] Emission Factors from Ispat Inland HAPs Inventory

Table A3 - B
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM COMBUSTION SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: No. 13 Blast Furnace
Emission Location: Stoves (NG)

Change in Natural Gas Consumption (MMSCF/yr)	254.43

Hazardous Air Pollutant	Emission Factor (lb/MMSCF)[1]	Change in HAP Emission Rate	
		(tons/yr)	(lbs/hr)
Non-POMs			
Benzene	2.10E-03	2.67E-04	6.10E-05
Dichlorobenzene	1.20E-03	1.53E-04	3.49E-05
Formaldehyde	7.50E-02	9.54E-03	2.18E-03
Hexane	1.80E+00	2.29E-01	5.23E-02
Naphthalene	6.10E-04	7.76E-05	1.77E-05
Toluene	3.40E-03	4.33E-04	9.88E-05
Subtotal Non-POMs		*2.39E-01*	*5.47E-02*
POMs			
2-Methylnaphthalene	2.40E-05	3.05E-06	6.97E-07
3-Methylchloranthrene	1.80E-06	2.29E-07	5.23E-08
7,12-Dimethylbenz(a)-anthracene	1.60E-05	2.04E-06	4.65E-07
Acenaphthene	1.80E-06	2.29E-07	5.23E-08
Acenaphthylene	1.80E-06	2.29E-07	5.23E-08
Anthracene	2.40E-06	3.05E-07	6.97E-08
Benz(a)anthracene	1.80E-06	2.29E-07	5.23E-08
Benzo(a)pyrene	1.20E-06	1.53E-07	3.49E-08
Benzo(b)fluoranthene	1.80E-06	2.29E-07	5.23E-08
Benzo(g,h,I)perylene	1.20E-06	1.53E-07	3.49E-08
Benzo(k)fluoranthene	1.80E-06	2.29E-07	5.23E-08
Chrysene	1.80E-06	2.29E-07	5.23E-08
Dibenzo(a,h)anthracene	1.20E-06	1.53E-07	3.49E-08
Fluoranthene	3.00E-06	3.82E-07	8.71E-08
Fluorene	2.80E-06	3.56E-07	8.13E-08
Indeno(1,2,3-cd)pyrene	1.80E-06	2.29E-07	5.23E-08
Phenanathrene	1.70E-05	2.16E-06	4.94E-07
Pyrene	5.00E-06	6.36E-07	1.45E-07
Subtotal POMs		*1.12E-05*	*2.56E-06*
Metallic HAPs			
Arsenic	2.00E-04	2.54E-05	5.81E-06
Beryllium	1.20E-05	1.53E-06	3.49E-07
Cadmium	1.10E-03	1.40E-04	3.19E-05
Chromium	1.40E-03	1.78E-04	4.07E-05
Cobalt	8.40E-05	1.07E-05	2.44E-06
Manganese	3.80E-04	4.83E-05	1.10E-05
Mercury	2.60E-04	3.31E-05	7.55E-06
Nickel	2.10E-03	2.67E-04	6.10E-05
Selenium	2.40E-05	3.05E-06	6.97E-07
Subtotal Metallic HAPs		*7.07E-04*	*1.61E-04*
	Total HAPs	**2.40E-01**	**5.48E-02**

[1] Emission Factors specified in EPA's AP-42 Section 1.4, July 1998 for Natural Gas Combustio

Table A3 - D
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM COMBUSTION SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: TBBH Boilers
Emission Location: TBBH Boilers (BFG)

Change in Blast Furnace Gas Consumption (MMSCF/yr)	22,433

Hazardous Air Pollutant	Emission Factor (lb/MMSCF)[1]	Change in HAP Emission Rate	
		(tons/yr)	(lbs/hr)
Non-POM HAPs			
Acetaldehyde	5.88E-03	6.60E-02	1.51E-02
Acetophenone	1.55E-04	1.74E-03	3.97E-04
Acrolein	3.00E-03	3.36E-02	7.68E-03
Benzene	1.34E-02	1.50E-01	3.43E-02
Benzyl Chloride	7.23E-03	8.11E-02	1.85E-02
DEHP	7.54E-04	8.46E-03	1.93E-03
Bromoform	4.02E-04	4.51E-03	1.03E-03
Carbon Disulfide	1.34E-03	1.50E-02	3.43E-03
Carbonyl Sulfide	9.78E-03	1.10E-01	2.50E-02
2-Chloroacetophenone	7.25E-05	8.13E-04	1.86E-04
Chlorobenzene	2.27E-04	2.55E-03	5.81E-04
Chloroform	6.09E-04	6.83E-03	1.56E-03
Cumene	5.48E-05	6.15E-04	1.40E-04
Dimethyl Sulfate	4.96E-04	5.56E-03	1.27E-03
2,4-Dinitrotoluene	3.10E-06	3.48E-05	7.94E-06
Ethylbenzene	9.71E-04	1.09E-02	2.49E-03
Ethyl Chloride	4.34E-04	4.87E-03	1.11E-03
Ethelyne Dibromide	1.22E-05	1.37E-04	3.12E-05
Ethelyne Dichloride	4.13E-04	4.63E-03	1.06E-03
Formaldehyde	2.48E-03	2.78E-02	6.35E-03
Hexane	6.92E-04	7.76E-03	1.77E-03
Isophorone	5.99E-03	6.72E-02	1.53E-02
Methyl Bromide	1.65E-03	1.85E-02	4.23E-03
Methyl Chloride	5.47E-03	6.14E-02	1.40E-02
Methyl Chloroform (1,1,1-Trichloroethane)	1.49E-04	1.67E-03	3.82E-04
Methyl Ethyl Ketone (MEK)	4.03E-03	4.52E-02	1.03E-02
Methylhydrazine	1.76E-03	1.97E-02	4.51E-03
Methyl Methacrylate	2.06E-04	2.31E-03	5.28E-04
Methyl tert butyl ether	3.61E-04	4.05E-03	9.24E-04
Methylene Chloride	3.00E-03	3.36E-02	7.68E-03
Naphthalene	4.73E-02	5.31E-01	1.21E-01
Phenol	1.65E-04	1.85E-03	4.23E-04
Propionaldehyde	3.92E-03	4.40E-02	1.00E-02
Styrene	2.58E-04	2.89E-03	6.61E-04
Tetrachloroethylene	4.44E-04	4.98E-03	1.14E-03
Toluene	2.48E-03	2.78E-02	6.35E-03
Vinyl Acetate	7.83E-05	8.78E-04	2.01E-04
Xylene	3.82E-04	4.28E-03	9.78E-04
Subtotal of Non-POMs HAPs		*1.41E+00*	*3.23E-01*
Metallic HAPs			
Antimony	2.00E-04	2.24E-03	5.12E-04
Cadmium	5.60E-06	6.28E-05	1.43E-05
Chromium	9.61E-05	1.08E-03	2.46E-04
Cyanide	2.58E-02	2.89E-01	6.61E-02
HCN	2.74E-03	3.07E-02	7.02E-03
Lead	6.70E-05	7.52E-04	1.72E-04
Manganese	7.60E-03	8.52E-02	1.95E-02
Subtotal Metallic HAPs		*4.10E-01*	*9.35E-02*
	Totals	**1.82E+00**	**4.16E-01**

[1] Emission Factors from Ispat Inland HAPs Inventory

Table A3 - E
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 1 BOP HM Desulfurization Baghouse

Change in PM_{10} Emission Rate (tons/yr)	3.81

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.001900%	0.00007	0.00002
Arsenic	0.003300%	0.00013	0.00003
Chromium	0.021700%	0.00083	0.00019
Cobalt	0.000390%	0.00001	0.00000
Lead	0.009500%	0.00036	0.00008
Manganese	0.437000%	0.01667	0.00380
Selenium	0.000620%	0.00002	0.00001
	Totals	0.01809	0.00413

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Table A3 - F
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 1 BOP Gas Cleaner

Change in PM_{10} Emission Rate (tons/yr)	16.07

Hazardous Air Pollutant	Weight Percent of HAP in Sludge	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.001000%	0.00016	0.00004
Arsenic	0.000490%	0.00008	0.00002
Chromium	0.025700%	0.00413	0.00094
Cobalt	0.000200%	0.00003	0.00001
Lead	0.094000%	0.01511	0.00345
Manganese	0.478000%	0.07684	0.01754
	Totals	0.09635	0.02200

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Table A3 - G
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 1 BOP CAS Bell/OB Lancing Baghouse

Change in PM_{10} Emission Rate (tons/yr)	1.24

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.000740%	0.00001	0.00000
Arsenic	0.002500%	0.00003	0.00001
Cadmium	0.014200%	0.00018	0.00004
Chromium	0.034800%	0.00043	0.00010
Cobalt	0.000810%	0.00001	0.00000
Lead	0.290000%	0.00359	0.00082
Manganese	2.250000%	0.02784	0.00636
Mercury	0.000017%	0.00000	0.00000
	Totals	0.03209	0.00733

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Table A3 - H
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 2 Caster Mold Baghouses

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.000560%	0.00000	0.00000
Arsenic	0.000620%	0.00000	0.00000
Cadmium	0.004380%	0.00000	0.00000
Chromium	0.005170%	0.00000	0.00000
Cobalt	0.002600%	0.00000	0.00000
Lead	0.022000%	0.00000	0.00000
Manganese	0.898000%	0.00000	0.00000
Mercury	0.000028%	0.00000	0.00000
	Totals	0.00000	0.00000

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Table A3 - I
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 2 QBOP HM Desulfurization Baghouse

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.001900%	0.00000	0.00000
Arsenic	0.003300%	0.00000	0.00000
Chromium	0.021700%	0.00000	0.00000
Cobalt	0.000390%	0.00000	0.00000
Lead	0.009500%	0.00000	0.00000
Manganese	0.437000%	0.00000	0.00000
Selenium	0.000620%	0.00000	0.00000
	Totals	0.00000	0.00000

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Table A3 - J
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 2 QBOP Secondary Emissions Baghouse

Change in PM_{10} Emission Rate (tons/y	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.001200%	0.00000	0.00000
Arsenic	0.000720%	0.00000	0.00000
Cadmium	0.039900%	0.00000	0.00000
Chromium	0.040000%	0.00000	0.00000
Cobalt	0.000760%	0.00000	0.00000
Lead	0.084100%	0.00000	0.00000
Manganese	0.754000%	0.00000	0.00000
Mercury	0.000238%	0.00000	0.00000
	Totals	0.00000	0.00000

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Table A3 - K
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 2 QBOP Gas Cleaner

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.000910%	0.00000	0.00000
Arsenic	0.000790%	0.00000	0.00000
Cadmium	0.001300%	0.00000	0.00000
Chromium	0.016800%	0.00000	0.00000
Lead	0.120000%	0.00000	0.00000
Manganese	0.447000%	0.00000	0.00000
	Totals	0.00000	0.00000

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Table A3 - L
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 1 LMF Fume Exhaust Baghouse

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.002000%	0.00000	0.00000
Arsenic	0.004200%	0.00000	0.00000
Cadmium	0.002560%	0.00000	0.00000
Chromium	0.049000%	0.00000	0.00000
Cobalt	0.001800%	0.00000	0.00000
Manganese	6.690000%	0.00000	0.00000
Mercury	0.000009%	0.00000	0.00000
Nickel	0.020600%	0.00000	0.00000
	Totals	0.00000	0.00000

file: process.xls (Page nse)

Table A3 - M
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: **Steel Producing**
Emission Location: **No. 2 LMF Fume Exhaust Baghouse**

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.002000%	0.00000	0.00000
Arsenic	0.004200%	0.00000	0.00000
Cadmium	0.002560%	0.00000	0.00000
Chromium	0.049000%	0.00000	0.00000
Cobalt	0.001800%	0.00000	0.00000
Manganese	6.690000%	0.00000	0.00000
Mercury	0.000009%	0.00000	0.00000
Nickel	0.020600%	0.00000	0.00000
	Totals	0.00000	0.00000

file: process.xls (Page nsf)

Table A3 - N
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through The No. 1 BOP

Emission Unit: Steel Producing
Emission Location: No. 3 LMF Fume Exhaust/Mat. Handling Baghouse

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.002000%	0.00000	0.00000
Arsenic	0.004200%	0.00000	0.00000
Cadmium	0.002560%	0.00000	0.00000
Chromium	0.049000%	0.00000	0.00000
Cobalt	0.001800%	0.00000	0.00000
Manganese	6.690000%	0.00000	0.00000
Mercury	0.000009%	0.00000	0.00000
Nickel	0.020600%	0.00000	0.00000
	Totals	0.00000	0.00000

file: process.xls (Page nsg)

Table A3 - O
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Iron Producing
Emission Location: No. 13 Blast Furnace Casthouse Baghouse

Change in PM_{10} Emission Rate (tons/yr)	5.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.001200%	0.00006	0.00001
Arsenic	0.001120%	0.00006	0.00001
Chromium	0.025600%	0.00128	0.00029
Lead	0.005300%	0.00026	0.00006
Manganese	0.441000%	0.02204	0.00503
Selenium	0.004400%	0.00022	0.00005
POM	0.000790%	0.00004	0.00001
Quinoline	0.000050%	0.00000	0.00000
	Totals	0.02396	0.00547

file: process.xls (Page idb)

Table A3 - P
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM COMBUSTION SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: No. 13 Blast Furnace
Emission Location: Stoves (NG)

Change in Natural Gas Consumption (MMSCF/yr)	254.43

Hazardous Air Pollutant	Emission Factor (lb/MMSCF)[1]	Change in HAP Emission Rate	
		(tons/yr)	(lbs/hr)
Non-POMs			
Benzene	2.10E-03	2.67E-04	6.10E-05
Dichlorobenzene	1.20E-03	1.53E-04	3.49E-05
Formaldehyde	7.50E-02	9.54E-03	2.18E-03
Hexane	1.80E+00	2.29E-01	5.23E-02
Naphthalene	6.10E-04	7.76E-05	1.77E-05
Toluene	3.40E-03	4.33E-04	9.88E-05
Subtotal Non-POMs		*2.39E-01*	*5.47E-02*
POMs			
2-Methylnaphthalene	2.40E-05	3.05E-06	6.97E-07
3-Methylchloranthrene	1.80E-06	2.29E-07	5.23E-08
7,12-Dimethylbenz(a)-anthracene	1.60E-05	2.04E-06	4.65E-07
Acenaphthene	1.80E-06	2.29E-07	5.23E-08
Acenaphthylene	1.80E-06	2.29E-07	5.23E-08
Anthracene	2.40E-06	3.05E-07	6.97E-08
Benz(a)anthracene	1.80E-06	2.29E-07	5.23E-08
Benzo(a)pyrene	1.20E-06	1.53E-07	3.49E-08
Benzo(b)fluoranthene	1.80E-06	2.29E-07	5.23E-08
Benzo(g,h,I)perylene	1.20E-06	1.53E-07	3.49E-08
Benzo(k)fluoranthene	1.80E-06	2.29E-07	5.23E-08
Chrysene	1.80E-06	2.29E-07	5.23E-08
Dibenzo(a,h)anthracene	1.20E-06	1.53E-07	3.49E-08
Fluoranthene	3.00E-06	3.82E-07	8.71E-08
Fluorene	2.80E-06	3.56E-07	8.13E-08
Indeno(1,2,3-cd)pyrene	1.80E-06	2.29E-07	5.23E-08
Phenanathrene	1.70E-05	2.16E-06	4.94E-07
Pyrene	5.00E-06	6.36E-07	1.45E-07
Subtotal POMs		*1.12E-05*	*2.56E-06*
Metallic HAPs			
Arsenic	2.00E-04	2.54E-05	5.81E-06
Beryllium	1.20E-05	1.53E-06	3.49E-07
Cadmium	1.10E-03	1.40E-04	3.19E-05
Chromium	1.40E-03	1.78E-04	4.07E-05
Cobalt	8.40E-05	1.07E-05	2.44E-06
Manganese	3.80E-04	4.83E-05	1.10E-05
Mercury	2.60E-04	3.31E-05	7.55E-06
Nickel	2.10E-03	2.67E-04	6.10E-05
Selenium	2.40E-05	3.05E-06	6.97E-07
Subtotal Metallic HAPs		*7.07E-04*	*1.61E-04*
	Total HAPs	**2.40E-01**	**5.48E-02**

[1] Emission Factors specified in EPA's AP-42 Section 1.4, July 1998 for Natural Gas Combustio

Table A3 - Q
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM COMBUSTION SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: No. 13 Blast Furnace
Emission Location: Stoves (BFG)

Change in Blast Furnace Gas Consumption (MMSCF/yr)	8,047

Hazardous Air Pollutant	Emission Factor (lb/MMSCF)[1]	Change in HAP Emission Rate	
		(tons/yr)	(lbs/hr)
Non-POM HAPs			
Acetaldehyde	5.88E-03	2.37E-02	5.40E-03
Acetophenone	1.55E-04	6.24E-04	1.42E-04
Acrolein	3.00E-03	1.21E-02	2.76E-03
Benzene	1.34E-02	5.39E-02	1.23E-02
Benzyl Chloride	7.23E-03	2.91E-02	6.64E-03
DEHP	7.54E-04	3.03E-03	6.93E-04
Bromoform	4.02E-04	1.62E-03	3.69E-04
Carbon Disulfide	1.34E-03	5.39E-03	1.23E-03
Carbonyl Sulfide	9.78E-03	3.93E-02	8.98E-03
2-Chloroacetophenone	7.25E-05	2.92E-04	6.66E-05
Chlorobenzene	2.27E-04	9.13E-04	2.09E-04
Chloroform	6.09E-04	2.45E-03	5.59E-04
Cumene	5.48E-05	2.20E-04	5.03E-05
Dimethyl Sulfate	4.96E-04	2.00E-03	4.56E-04
2,4-Dinitrotoluene	3.10E-06	1.25E-05	2.85E-06
Ethylbenzene	9.71E-04	3.91E-03	8.92E-04
Ethyl Chloride	4.34E-04	1.75E-03	3.99E-04
Ethelyne Dibromide	1.22E-05	4.91E-05	1.12E-05
Ethelyne Dichloride	4.13E-04	1.66E-03	3.79E-04
Formaldehyde	2.48E-03	9.98E-03	2.28E-03
Hexane	6.92E-04	2.78E-03	6.36E-04
Isophorone	5.99E-03	2.41E-02	5.50E-03
Methyl Bromide	1.65E-03	6.64E-03	1.52E-03
Methyl Chloride	5.47E-03	2.20E-02	5.02E-03
Methyl Chloroform (1,1,1-Trichloroethane)	1.49E-04	5.99E-04	1.37E-04
Methyl Ethyl Ketone (MEK)	4.03E-03	1.62E-02	3.70E-03
Methylhydrazine	1.76E-03	7.08E-03	1.62E-03
Methyl Methacrylate	2.06E-04	8.29E-04	1.89E-04
Methyl tert butyl ether	3.61E-04	1.45E-03	3.32E-04
Methylene Chloride	3.00E-03	1.21E-02	2.76E-03
Naphthalene	4.73E-02	1.90E-01	4.34E-02
Phenol	1.65E-04	6.64E-04	1.52E-04
Propionaldehyde	3.92E-03	1.58E-02	3.60E-03
Styrene	2.58E-04	1.04E-03	2.37E-04
Tetrachloroethylene	4.44E-04	1.79E-03	4.08E-04
Toluene	2.48E-03	9.98E-03	2.28E-03
Vinyl Acetate	7.83E-05	3.15E-04	7.19E-05
Xylene	3.82E-04	1.54E-03	3.51E-04
Subtotal of Non-POMs HAPs		*5.07E-01*	*1.16E-01*
Metallic HAPs			
Antimony	2.00E-04	8.05E-04	1.84E-04
Cadmium	5.60E-06	2.25E-05	5.14E-06
Chromium	9.61E-05	3.87E-04	8.83E-05
Cyanide	2.58E-02	1.04E-01	2.37E-02
HCN	2.74E-03	1.10E-02	2.52E-03
Lead	6.70E-05	2.70E-04	6.15E-05
Manganese	7.60E-03	3.06E-02	6.98E-03
Subtotal Metallic HAPs		*1.47E-01*	*3.35E-02*
	Totals	**6.54E-01**	**1.49E-01**

[1] Emission Factors from Ispat Inland HAPs Inventory

Table A3 - R
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM COMBUSTION SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: TBBH Boilers
Emission Location: TBBH Boilers (BFG)

Change in Blast Furnace Gas Consumption (MMSCF/yr)	22,433

Hazardous Air Pollutant	Emission Factor (lb/MMSCF)[1]	Change in HAP Emission Rate	
		(tons/yr)	(lbs/hr)
Non-POM HAPs			
Acetaldehyde	5.88E-03	6.60E-02	1.51E-02
Acetophenone	1.55E-04	1.74E-03	3.97E-04
Acrolein	3.00E-03	3.36E-02	7.68E-03
Benzene	1.34E-02	1.50E-01	3.43E-02
Benzyl Chloride	7.23E-03	8.11E-02	1.85E-02
DEHP	7.54E-04	8.46E-03	1.93E-03
Bromoform	4.02E-04	4.51E-03	1.03E-03
Carbon Disulfide	1.34E-03	1.50E-02	3.43E-03
Carbonyl Sulfide	9.78E-03	1.10E-01	2.50E-02
2-Chloroacetophenone	7.25E-05	8.13E-04	1.86E-04
Chlorobenzene	2.27E-04	2.55E-03	5.81E-04
Chloroform	6.09E-04	6.83E-03	1.56E-03
Cumene	5.48E-05	6.15E-04	1.40E-04
Dimethyl Sulfate	4.96E-04	5.56E-03	1.27E-03
2,4-Dinitrotoluene	3.10E-06	3.48E-05	7.94E-06
Ethylbenzene	9.71E-04	1.09E-02	2.49E-03
Ethyl Chloride	4.34E-04	4.87E-03	1.11E-03
Ethelyne Dibromide	1.22E-05	1.37E-04	3.12E-05
Ethelyne Dichloride	4.13E-04	4.63E-03	1.06E-03
Formaldehyde	2.48E-03	2.78E-02	6.35E-03
Hexane	6.92E-04	7.76E-03	1.77E-03
Isophorone	5.99E-03	6.72E-02	1.53E-02
Methyl Bromide	1.65E-03	1.85E-02	4.23E-03
Methyl Chloride	5.47E-03	6.14E-02	1.40E-02
Methyl Chloroform (1,1,1-Trichloroethane)	1.49E-04	1.67E-03	3.82E-04
Methyl Ethyl Ketone (MEK)	4.03E-03	4.52E-02	1.03E-02
Methylhydrazine	1.76E-03	1.97E-02	4.51E-03
Methyl Methacrylate	2.06E-04	2.31E-03	5.28E-04
Methyl tert butyl ether	3.61E-04	4.05E-03	9.24E-04
Methylene Chloride	3.00E-03	3.36E-02	7.68E-03
Naphthalene	4.73E-02	5.31E-01	1.21E-01
Phenol	1.65E-04	1.85E-03	4.23E-04
Propionaldehyde	3.92E-03	4.40E-02	1.00E-02
Styrene	2.58E-04	2.89E-03	6.61E-04
Tetrachloroethylene	4.44E-04	4.98E-03	1.14E-03
Toluene	2.48E-03	2.78E-02	6.35E-03
Vinyl Acetate	7.83E-05	8.78E-04	2.01E-04
Xylene	3.82E-04	4.28E-03	9.78E-04
Subtotal of Non-POMs HAPs		*1.41E+00*	*3.23E-01*
Metallic HAPs			
Antimony	2.00E-04	2.24E-03	5.12E-04
Cadmium	5.60E-06	6.28E-05	1.43E-05
Chromium	9.61E-05	1.08E-03	2.46E-04
Cyanide	2.58E-02	2.89E-01	6.61E-02
HCN	2.74E-03	3.07E-02	7.02E-03
Lead	6.70E-05	7.52E-04	1.72E-04
Manganese	7.60E-03	8.52E-02	1.95E-02
Subtotal Metallic HAPs		*4.10E-01*	*9.35E-02*
	Totals	1.82E+00	4.16E-01

[1] Emission Factors from Ispat Inland HAPs Inventory

Table A3 -S
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 1 BOP HM Desulfurization Baghouse

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.001900%	0.00000	0.00000
Arsenic	0.003300%	0.00000	0.00000
Chromium	0.021700%	0.00000	0.00000
Cobalt	0.000390%	0.00000	0.00000
Lead	0.009500%	0.00000	0.00000
Manganese	0.437000%	0.00000	0.00000
Selenium	0.000620%	0.00000	0.00000
	Totals	0.00000	0.00000

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Table A3 - T
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 1 BOP Gas Cleaner

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Sludge	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.001000%	0.00000	0.00000
Arsenic	0.000490%	0.00000	0.00000
Chromium	0.025700%	0.00000	0.00000
Cobalt	0.000200%	0.00000	0.00000
Lead	0.094000%	0.00000	0.00000
Manganese	0.478000%	0.00000	0.00000
	Totals	0.00000	0.00000

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Table A3 - U
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 1 BOP CAS Bell/OB Lancing Baghouse

Change in PM_{10} Emission Rate (tons/yr)	0.00

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.000740%	0.00000	0.00000
Arsenic	0.002500%	0.00000	0.00000
Cadmium	0.014200%	0.00000	0.00000
Chromium	0.034800%	0.00000	0.00000
Cobalt	0.000810%	0.00000	0.00000
Lead	0.290000%	0.00000	0.00000
Manganese	2.250000%	0.00000	0.00000
Mercury	0.000017%	0.00000	0.00000
	Totals	0.00000	0.00000

file: process.xls (Page ssc)

Table A3 - V
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 2 Caster Mold Baghouses

Change in PM_{10} Emission Rate (tons/yr)	0.03

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.000560%	0.00000	0.00000
Arsenic	0.000620%	0.00000	0.00000
Cadmium	0.004380%	0.00000	0.00000
Chromium	0.005170%	0.00000	0.00000
Cobalt	0.002600%	0.00000	0.00000
Lead	0.022000%	0.00001	0.00000
Manganese	0.898000%	0.00024	0.00005
Mercury	0.000028%	0.00000	0.00000
	Totals	0.00024	0.00006

file: process.xls (Page nsa)

Table A3 - W
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 2 QBOP HM Desulfurization Baghouse

Change in PM_{10} Emission Rate (tons/yr)	2.46

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.001900%	0.00005	0.00001
Arsenic	0.003300%	0.00008	0.00002
Chromium	0.021700%	0.00053	0.00012
Cobalt	0.000390%	0.00001	0.00000
Lead	0.009500%	0.00023	0.00005
Manganese	0.437000%	0.01074	0.00245
Selenium	0.000620%	0.00002	0.00000
	Totals	0.01166	0.00266

file: process.xls (Page nsb)

Table A3 - X
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 2 QBOP Secondary Emissions Baghouse

Change in PM_{10} Emission Rate (tons/yr)	4.73

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.001200%	0.00006	0.00001
Arsenic	0.000720%	0.00003	0.00001
Cadmium	0.039900%	0.00189	0.00043
Chromium	0.040000%	0.00189	0.00043
Cobalt	0.000760%	0.00004	0.00001
Lead	0.084100%	0.00397	0.00091
Manganese	0.754000%	0.03563	0.00813
Mercury	0.000238%	0.00001	0.00000
	Totals	0.04351	0.00993

file: process.xls (Page nsc)

Table A3 - Y
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 2 QBOP Gas Cleaner

Change in PM_{10} Emission Rate (tons/yr)	39.76

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10)	
		(tons/yr)	(lbs/hr)
Antimony	0.000910%	0.00036	0.00008
Arsenic	0.000790%	0.00031	0.00007
Cadmium	0.001300%	0.00052	0.00012
Chromium	0.016800%	0.00668	0.00152
Lead	0.120000%	0.04771	0.01089
Manganese	0.447000%	0.17771	0.04057
	Totals	0.23329	0.05326

file: process.xls (Page nsd)

Table A3 - Z
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 1 LMF Fume Exhaust Baghouse

Change in PM_{10} Emission Rate (tons/yr)	1.20

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.002000%	0.00002	0.00001
Arsenic	0.004200%	0.00005	0.00001
Cadmium	0.002560%	0.00003	0.00001
Chromium	0.049000%	0.00059	0.00013
Cobalt	0.001800%	0.00002	0.00000
Manganese	6.690000%	0.08014	0.01830
Mercury	0.000009%	0.00000	0.00000
Nickel	0.020600%	0.00025	0.00006
	Totals	0.08110	0.01852

file: process.xls (Page nse)

Table A3 - AA
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: **Steel Producing**
Emission Location: **No. 2 LMF Fume Exhaust Baghouse**

Change in PM_{10} Emission Rate (tons/yr)	1.20

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.002000%	0.00002	0.00001
Arsenic	0.004200%	0.00005	0.00001
Cadmium	0.002560%	0.00003	0.00001
Chromium	0.049000%	0.00059	0.00013
Cobalt	0.001800%	0.00002	0.00000
Manganese	6.690000%	0.08014	0.01830
Mercury	0.000009%	0.00000	0.00000
Nickel	0.020600%	0.00025	0.00006
	Totals	0.08110	0.01852

file: process.xls (Page nsf)

Table A3 - BB
US STEEL GARY WORKS
CONSTRUCTION PERMIT APPLICATION
NO. 13 BLAST FURNACE RELINE
CALCULATION OF CHANGE IN HAZARDOUS AIR POLLUTANTS
EMISSION RATE FROM PROCESS SOURCES
All Additional Hot Metal Through No. 2 Q-BOP

Emission Unit: Steel Producing
Emission Location: No. 3 LMF Fume Exhaust/Mat. Handling Baghouse

Change in PM_{10} Emission Rate (tons/yr)	0.60

Hazardous Air Pollutant	Weight Percent of HAP in Dust	HAP Emission Rate (Based on PM10) (tons/yr)	(lbs/hr)
Antimony	0.002000%	0.00001	0.00000
Arsenic	0.004200%	0.00002	0.00001
Cadmium	0.002560%	0.00002	0.00000
Chromium	0.049000%	0.00029	0.00007
Cobalt	0.001800%	0.00001	0.00000
Manganese	6.690000%	0.03981	0.00909
Mercury	0.000009%	0.00000	0.00000
Nickel	0.020600%	0.00012	0.00003
	Totals	0.04028	0.00920

file: process.xls (Page nsg)

Permit Processing: *Interim Minor Source Modification Petition*

Check off after completed
Mark N/A when not applicable

Company Name: US Steel - Gary

Identification Number: I 089 - 20118 - 00121

_____ Receive Interim Minor Source Modification Petetion in a blue folder after signature.
_____ E-mail reviewer asking for the files to be sent for upload

Proofread and check for:
_____ Permit Summary Checklist
_____ Interim Minor Source Modification Approval Letter
_____ Interim Minor Permit Revision/Minor Source Modification Evaluation Sheet
_____ Checklist for the Administrative Adjudication Act (AAA)
_____ Copy of receipt verifying payment of interim filing fee ($500)
_____ Proof of Publication "Notice of 14-day Public Comment Period" submitted by Company **(if applicable)**
_____ Petition for Interim Construction Permit from Company
_____ Date the letter and make 7 copies (always)
_____ Make four copies of the Interim Minor Permit Revision/Minor Source Modification Evaluation Sheet (always)
_____ Make additional copies (if needed)
  _____ If NWO, make 1 copy of letter and Interim Minor Permit Revision/ Minor Source Modification Evaluation Sheet
  _____ If NRO, make 1 copy of letter and Interim Minor Permit Revision/ Minor Source Modification Evaluation Sheet
  _____ If SWO, make 1 copy of letter and Interim Minor Permit Revision/ Minor Source Modification Evaluation Sheet
  _____ If LA, make 1 copy of letter and Interim Minor Permit Revision/ Minor Source Modification Evaluation Sheet

NJ Distribute the following: (always)
  _____ To applicant: original signed document, and original Interim Permit Revision/ Minor Source Modification Evaluation Sheet
  ✓ To folder: one copy of signed document and copy of Interim Permit Revision/ Minor Source Modification Evaluation Sheet and all other materials
  ✓ To County Health Department: one copy of signed document
  ✓ To Compliance Section (ACS): one copy of signed document (highlight inspector's name at bottom) and copy of Interim Permit Revision/Minor Source Modification Evaluation Sheet
  ✓ To Permits Administration Files: one copy of signed document
  X To Technical Support and Modeling Section - Michele Boner (MLB): one copy of signed document

___ To Interim Permit Reviewer: one copy of signed document and copy of Interim Permit Revision/Minor Source Modification Evaluation Sheet

___ To Permit Reviewer of the Regular application (2061/8): one copy of signed document and copy of Interim Permit Revision/Minor Source Modification Evaluation Sheet

Distribute the following: (if needed)

___ To AAA addresses: one copy of signed document

___ To NWO: one copy of signed document and copy of Interim Permit Revision/Minor Source Modification Evaluation Sheet

___ To NRO: one copy of signed document and copy of Interim Permit Revision/Minor Source Modification Evaluation Sheet

___ To SWO: one copy of signed document and copy of Interim Permit Revision/Minor Source Modification Evaluation Sheet

___ To Local Agency: one copy of signed document and a copy of Interim Permit Revision/Minor Source Modification Evaluation Sheet

___ Enter in Tracking: Final Permit Mailed and Issued Final Permit

___ Upload files

___ Make groupwise task for 2 days later to make sure files are uploaded to EPA

FILE ROOM FOLDER PREPARATION PROCEDURES

___ Remove hanging file from drawer.

___ Combine copy of final documents in blue folder with all materials from hanging file, recycling any duplicates

___ Attach a blue file room routing slip to the manilla folder with the following information:

- Company Name
- Identification Number
- Interim Construction
- County
- Issued: (date issued)

___ Route manilla folder to **the hanging file and place in the regular permit application file. Do not send to file room at this time.**

___ Enter in Tracking: (Date Final Permit File prepared and sent to reviewer)

Revised 6/29/99jam

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

October 20, 2005

TO: Gary Public Library

From: Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Subject: **Important Information for Display Regarding a Final Decision**

Applicant Name: **U.S. Steel Gary Works**
Permit Number: **089-20118-00121**

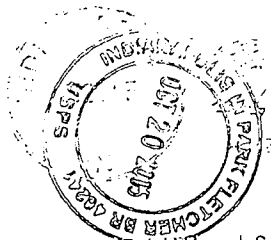
You previously received information to make available to the public during the public comment period of a draft permit. Enclosed is a copy of the final decision and supporting materials for the same project. Please place the enclosed information along with the information you previously received. To ensure that your patrons have ample opportunity to review the enclosed permit, **we ask that you retain this document for at least 60 days.**

The applicant is responsible for placing a copy of the application in your library. If the permit application is not on file, or if you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185.

Enclosures
Final Library.dot 1/10/05

Mail Code 61-53

IDEM Staff	Debbie Pabst 10/20/2005 U.S. Steel Gary Works 089-20118-00121 FINAL		AFFIX STA HERE IF USED AS CERTIFIC OF MAILIN
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**



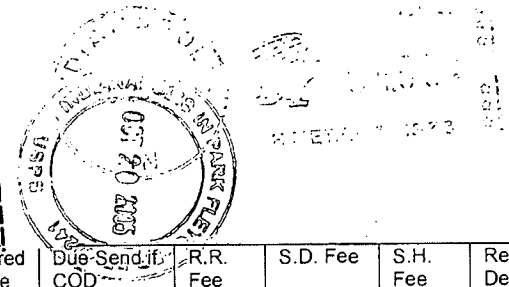
Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Mr. Chris Hernandez Pipefitters Association, Local Union 597 8762 Louisiana St., Suite G Merrillville IN 46410 *(Affected Party)*									
2		Craig Hogarth 7901 West Morris Street Indianapolis IN 46231 *(Affected Party)*									
3		**Mr. James Alexander United States Steel Corporation - Gary Works One North Broadway MS 70A Gary IN 46402-3199 *(Source) (USPS SIG)***									
4		Lake County Commissioners 2293 N. Main St. Crown Point IN 46307 *(Local Official)*									
5		Northwestern In Regional Planning Com (NIRPC) 6100 Southport Road Portage IN 46368 *(Local Official)*									
6		Mr. Jim Arendas Brendenburg Industrial One North Broadway T.S. 670 Gary IN 46402 *(Affected Party)*									
7		Morgan McCabe 836 Van Buren Hobart IN 46342 *(Affected Party)*									
8		**Mr. Raymond Terza US Steel One North Broadway Gary IN 46402 *(Responsible Official)***									
9											
10											
11											
12											
13											
14											
15											

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913**, and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
7	7		

FACSIMILIE OF PS Form 3877

Mail Code 61-53

DEM Staff	Debbie Pabst 10/20/2005 U.S. Steel Gary Works 089-20118-00121 FINAL		AFFIX ST HERE IF USED AS CERTIFICA OF MAILIN
Name and address of Sender	▶	Indiana Department of Environmental Management Office of Air Quality – Permits Branch 100 N. Senate Indianapolis, IN 46204	Type of Mail: **CERTIFICATE OF MAILING ONLY**



Line	Article Number	Name, Address, Street and Post Office Address	Postage	Handing Charges	Act. Value (If Registered)	Insured Value	Due Send if COD	R.R. Fee	S.D. Fee	S.H. Fee	Rest. Del. Fee Remarks
1		Dr. Susan Best Lake County Health Department 2293 North Main Street Crown Point IN 46307-1896 *(Health Department)*									
2		Ms. Colleen Aguirre P.O. Box 592 Hammond IN 46325-0592 *(Affected Party)*									
3		Mr. Todd Mintzer Inland Main Bldg MC 8-130 3210 Watling St East Chicago IN 46312 *(Affected Party)*									
4		Dr. Timothy Raykovich Lake County Health Department--East Chicago 100 West Chicago Avenue East Chicago IN 46312-2596 *(Health Department)*									
5		Gary - Hobart Water Corp 650 Madison St, P.O. Box M486 Gary IN 46401-0486 *(Affected Party)*									
6		Gary Public Library 220 W 5th Ave Gary IN 46402-1270 *(Library)*									
7		Dr. Adolphus A. Anekwe Lake County Health Department-Gary 1145 W. 5th Ave Gary IN 46402-1795 *(Health Department)*									
8		WJOB / WZVN Radio 6405 Olcott Ave Hammond IN 46320 *(Affected Party)*									
9		Lake County Health Deptartment-Hammond 649 Conkey St Hammond IN 46324-1101 *(Health Department)*									
10		Laurence A. McHugh Barnes & Thornburg 100 North Michigan South Bend IN 46601-1632 *(Affected Party)*									
11		Mr. Ardith Fitzpatrick N. 6542 Shorewood Hills Rd Lake Mills WI 53551 *(Affected Party)*									
12		Mr. Joseph Szczerbowski USWA, Local 12775 2515 Portage Mall Portage IN 46368 *(Affected Party)*									
13		Shawn Sobocinski 3229 E. Atlanta Court Portage IN 46368 (Affected Party)									
14		Lake County Commissioner 2293 N. Main Street Crown Point IN 46307 *(Local Official)*									
15		Mark Coleman 9 Locust Place Ogden Dunes IN 46368 *(Affected Party)*									

Total number of pieces Listed by Sender	Total number of Pieces Received at Post Office	Postmaster, Per (Name of Receiving employee)	The full declaration of value is required on all domestic and international registered mail. The maximum indemnity payable for the reconstruction of nonnegotiable documents under Express Mail document reconstructing insurance is $50,000 per piece subject to a limit of $50, 000 per occurrence. The maximum indemnity payable on Express mil merchandise insurance is $500. The maximum indemnity payable is $25,000 for registered mail, sent with optional postal insurance. See ***Domestic Mail Manual*** **R900, S913,** and **S921** for limitations of coverage on inured and COD mail. See ***International Mail Manual*** for limitations o coverage on international mail. Special handling charges apply only to Standard Mail (A) and Standard Mail (B) parcels.
15	15		

FACSIMILIE OF PS Form 3877

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

SENT VIA U.S. MAIL: CONFIRMED DELIVERY AND SIGNATURE REQUESTED

TO: James Alexander
U.S. Steel Gary Works
One North Broadway St #70A
Gary, IN 46402

DATE: October 20, 2005

FROM: Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

SUBJECT: Final Decision
Title V Significant Source Modification
089-20118-00121

Enclosed is the final decision and supporting materials for the air permit application referenced above. Please note that this packet contains the original, signed, permit documents.

The final decision is being sent to you because our records indicate that you are the contact person for this application. However, if you are not the appropriate person within your company to receive this document, please forward it to the correct person.

A copy of the final decision and supporting materials has also been sent via standard mail to:
Raymond Terza, Responsible Official
OAQ Permits Branch Interested Parties List

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178, or toll-free at 1-800-451-6027 (ext. 3-0178), and ask to speak to the permit reviewer who prepared the permit. If you think you have received this document in error, please contact Joanne Smiddie-Brush of my staff at 1-800-451-6027 (ext 3-0185), or via e-mail at jbrush@idem.IN.gov.

What if you are not satisfied with this decision and you want to file an appeal?

Who may file an appeal?
The decision described in the accompanying Notice of Decision may be administratively appealed. Filing an appeal is formally known as filing a "Petition for Administrative Review" to request an "administrative hearing."

If you object to this decision issued by the Indiana Department of Environmental Management (IDEM) and are: 1) the person to whom the decision was directed, 2) a party specified by law as being eligible to appeal, or 3) aggrieved or adversely affected by the decision, you are entitled to file an appeal. (An aggrieved or adversely affected person is one who would be considered by the court to be negatively impacted by the decision. If you file an appeal because you feel that you are aggrieved, it will be up to you to demonstrate in your appeal how you are directly impacted in a negative way by the decision).

The Indiana Office of Environmental Adjudication (OEA) was established by state law – see Indiana Code (IC) 4-21.5-7 – and is a separate state agency independent of IDEM. The jurisdiction of the OEA is limited to the review of environmental pollution concerns or any alleged technical or legal deficiencies associated with the IDEM decision making process. Once your request has been received by OEA, your appeal may be considered by an Environmental Law Judge.

What is required of persons filing an appeal?
Filing an appeal is a legal proceeding, so it is suggested that you consult with an attorney. Your request for an appeal must include your name and address and identify your interest in the decision (Or, if you are representing someone else, his or her name and address and their interest in the decision). In addition, please include a photocopy of the accompanying Notice of Decision or list the permit number and name of the applicant, or responsible party, in your letter.

Before a hearing is granted, you must identify the reason for the appeal request and the issues proposed for consideration at the hearing. You also must identify the permit terms and conditions that, in your judgment, would appropriately satisfy the requirements of law with respect to the IDEM decision being appealed. That is, you must suggest an alternative to the language in the permit (or other order, or decision) being appealed, and your suggested changes must be consistent with all applicable laws (See Indiana Code 13-15-6-2) and rules (See Title 315 of the Indiana Administrative Code, or 315 IAC).

The effective date of this agency action is stated on the accompanying Notice of Decision (or other IDEM decision notice). If you file a "Petition for Administrative Review" (appeal), you may wish to specifically request that the action be "stayed" (temporarily halted) because most appeals do not allow for an automatic "stay." If, after an evidentiary hearing, a "stay" is granted, the IDEM-approved action may be halted altogether, or only allowed to continue in part, until a final decision has been made regarding the appeal. However, if the action is not "stayed" the IDEM-approved activity will be allowed to continue during the appeal process.

(See reverse side)

Where can you file an appeal?
If you wish to file an appeal, you must do so in writing. There are no standard forms to fill out and submit; so you must state your case in a letter (called a petition for administrative review) to the Indiana Office of Environmental Adjudication (OEA). Do not send the original copy of your appeal request to IDEM. Instead, send or deliver your letter to:

The Indiana Office of Environmental Adjudication
100 North Senate Ave.
Indiana Government Center North
Room 1049
Indianapolis, IN 46204

If you file an appeal, also please send a copy of your appeal letter to the IDEM contact person identified in the Notice of Decision, and to the applicant (person receiving an IDEM permit, or other approval).

Your appeal (petition for administrative review) must be received by the Office of Environmental Adjudication in a timely manner. Different types of permit approvals have different deadlines for filing an appeal. The accompanying Notice of Decision (NOD) explains how to determine the due date for filing an appeal for this particular permit decision. To ensure that you meet this filing requirement, your appeal request must be:

1) Delivered in person to the OEA by the close-of-business on the due date. (If the due date falls on a day when the Office of Environmental Adjudication (OEA) is closed for the weekend or for a state holiday, then your petition will be accepted on the next business day on which OEA is open.); or
2) Given to a private carrier who will deliver it to the OEA on your behalf, (and from whom you must obtain a receipt dated on or before the due date); or
3) For those appeal requests sent by U.S. Mail, your letter must be postmarked by no later than midnight of the due date; or
4) Faxed to the OEA at 317/233-9372 before the close-of-business of the due date, provided that the original signed "Petition for Administrative Review" is also sent, or delivered, to the OEA in a timely manner.

What are the costs associated with filing an appeal?
The OEA does not charge a fee for filing documents for an administrative review or for the use of its hearing facilities. However, OEA does charge a fifteen cent ($.15) per page fee for copies of any documents you may request. Another cost that could be associated with your appeal would be for attorney's fees. Although you have the option to act as your own attorney, the administrative review and associated hearing are complex legal proceedings; therefore, you should consider whether your interests would be better represented by an experienced attorney.

What can you expect from the Office of Environmental Adjudication (OEA) after you file for an appeal?
The OEA will provide you with notice of any prehearing conferences, preliminary hearings, hearings, "stays," or orders disposing of the review of this decision. In addition, you may contact the OEA by phone at 317/232-8591 with any scheduling questions. However, technical questions should be directed to IDEM at the number indicated on the Notice of Decision.

Do not expect to discuss details of your case with the OEA other than in a formal setting such as a prehearing conference, a formal hearing, or a settlement conference. The OEA is not allowed to discuss a case without all sides being present. All parties to the proceeding are expected to appear at the initial prehearing conference.

PERMIT PROCESSING: PERMITS THAT REQUIRE PUBLIC NOTICE

COMPANY NAME: U.S. Steel – Gary Works

PERMIT NUMBER: 089-2018-A0121

PERMIT TYPE: Significant Source Modification

LIBRARY: Gary Public Library

ADDRESS: 220 W. 5th Ave.

NEWSPAPER: The Post Tribune CONTACT PERSON: Casie Newton

NEWSPAPER: _____ CONTACT PERSON: _____

PUBLIC NOTICE PROCESSING

FEES AND INVOICING

☑ Check CAATS database and folder to see if an administrative NOD was sent out for the filing fee (if applicable) or if any fees were submitted with the application.

☒ **If an Administrative NOD was not sent and no fees were paid with the application,** check the folder for a billing and refund sheet for fees due, then generate an invoice through Peoplesoft.

☑ **If an Administrative NOD was sent and the fees were paid,** or fees were paid with the application, check the folder for a billing and refund sheet to see if any additional fees are due.

☑ **If additional fees due**, generate an invoice through Peoplesoft, making sure to include any fees paid with the application or in response to an Administrative NOD as a credit.

☒ **If an Administrative NOD was sent but the fees were not paid**, inform Goldie or Gloria. It may be necessary to do a follow up on the filing fee invoice, or a credit rebill.

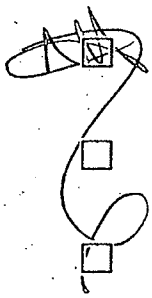
☐ **If fees have been paid**, verify that they are entered into CAATS database

☐ **If an Invoice is required**, enter into CAATS {Under Time Clock and Fees} Permit Fee Sent and the amount. In the comments section put in the Customer Number and Invoice Number.

PUBLIC NOTICE PROCESSING, continued

- [x] Make sure Public Notice is signed
- [x] Make sure each page of the permit is stamped or Watermarked "DRAFT"
- [x] Contact newspaper(s) for the publication date. Mon: Sept. 19, 05
- [x] Produce "**PN Newspaper Letter**" Template from the S drive at: S:/IGCN/OAM/Common/Admin/Templates. Produce fax sheet cover sheet, and fax original signed public notice and newspaper cover letter to the newspaper(s) Call and confirm fax receipt with the newspaper.

- **SPECIAL NOTE: In addition to the steps above---these steps need to be done if:**



- [x] MSOP Permits in Lake County—the public notice is only published in the Gary Post Tribune
- [ ] All other permits in Lake County are publish in the Gary Post Tribune and The Times
- [ ] If it is an acid rain permit, the application needs to be scanned as part of the draft permit for upload.

- [x] Check the Contact Database to make sure that the Source Contact and Responsible Official are in the Contact Database. If not, add or correct as needed.
- [x] Produce "**PN Applicant Cover Letter**" Template from the S drive at: S:/IGCN/OAM/Common/Admin/Templates
  Use the name/address shown on the Permit Letter (if applicable)
  If the Permit does not have a letter, use the Source Contact in CAATs
- [x] Produce "**PN Library**" Template from the S drive at: S:/IGCN/OAM/Common/Admin/Templates
- [x] Produce the "**PN AAA Cover Letter**" Template from the S drive at: S:/IGCN/OAM/Common/Admin/Templates
- [ ] If draft Title V, Acid Rain, or PSD, Produce the "**Affected States Notification**" Template from the S drive at: S:/IGCN/OAM/Common/Admin/Templates. Save letter to be sent as an email.

Use the Contact Database to:

- [x] Produce mailing labels
- [x] Produce Certificate of Mailing Form (always put draft and permit number at the top)
- [x] Once the certificate of mailing is produced, convert it to pdf and save it at: S:\IGCN\OAM\COMMON\ADMIN\Mailing sheets. Name it using the permit number and dmail.pdf (for example 12345dmail.pdf)

PUBLIC NOTICE PROCESSING, continued

NOTE: The "draft permit package" consists of the Public Notice letter, draft permit and related technical documents created by the permit reviewer

Make paper copies and distribute as needed:

- [x] Source Contact shown on permit/in CAATS: Original applicant cover letter, copy of newspaper letter, copy of public notice letter, original draft permit package.
- [x] Responsible Official listed in CAATS: copy of applicant cover letter, copy of newspaper letter, copy of public notice letter, copy of original draft permit package.
- [ ] Consultant/Agent (if applicable) copy of applicant cover letter, copy of newspaper cover letter, copy of public notice letter, copy of draft permit package.
- [x] *Ken Paul, OAQ Billing, Licensing & Training: Hard copy of newspaper letter only*
- [x] Library: Library cover letter, copy of newspaper, copy of public notice letter, copy of draft permit package and copy of AAA cover letter
  NOTE: if the application is for an INTIAL TITLE V PERMIT, ask Susan Newton to confirm with the library that they still have the application on file.
- [x] Reviewer: copy of the public notice letter and applicant cover letter.
  If contractor : fax the PN Letter and copy of the applicant cover letter to the contractor.
- [x] Health department: Interested parties cover letter and copy of Public Notice letter
- [x] Each name on the Interested Parties list: Interested parties cover letter, copy of public notice letter
- [x] Folder: copy of applicant cover letter, copy of newspaper letter, copy of library letter, copy of signed Public Notice letter and draft permit package, list of interested parties, Certificate of Mailing (when it comes back from the mailroom.)
- [ ] **If enforcement Referral**—place referral form in red folder, a copy of the hanging file (except receipts, interoffice confidential or new application check list), draft permit and public notice in a yellow folder and route to compliance

Convert to PDF and Upload

- [x] Request electronic files from the reviewer by email (If contractor, get from the S Drive)
- [x] Convert all permit documents to PDF and compile into one pdf file. NOTE: The pdf file that is Uploaded and distributed should include all the permit documents created by the permit reviewer, including the Public Notice letter, but none of the Admin letters.
- [x] Place pdf file in "upload" directory
- [x] Create a folder using the permit number in the "done" directory on the S drive and put all the draft Word/Word Processing/Excel files in that folder

Distribute electronic copies via e-mail, put the words "permit update" and the Name and Permit Number of the permit in the subject line

- [x] Inspectors copy: send pdf file by email to Sara Cloe. Include anticipated end date of PN period
- [x] Compliance Data Section: send pdf file by email to Dave Cline. Include anticipated end date of PN period.
- [x] Local Agency Liaison: send pdf file by email to Mindy Hahn, include anticipated end date of PN period (Note: send all permits to Mindy – she will sort which go to LA)
- [ ] If draft Title V, Acid Rain, or PSD, send the **"Affected States Notification"** letter to the appropriate State with pdf file.

Enter in CAATS:

- [x] Under {Mailings} *"Public Notice Mailed"*
- [ ] Under {Time Clock & Fees} *"Permit Fee Bill Sent" (if applicable, after receiving email confirming invoice was mailed from cashier's)*, Also include amount billed and invoice # in the comment box.
- [x] Under {Public Process} *"Draft Internet Upload"*
- [x] Under {Public Process} *"Draft Internet Ends"*
- [ ] Under {Public Process} *"Affected State(s) Notified" (if applicable)*
- [x] Make sure the library and newspaper are listed in CAATS *(yellow folder then public notice)*
- [x] Under {Mailings} *"Enforcement to Compliance" (if applicable)*

Make a task in GroupWise or mark it on calendar to make a follow up call to the newspaper on the day after it is scheduled to run to confirm the date it ran.

- [x] After calling newspaper, **enter in CAATS** database

Sept. 19, 05 *"Public Notice Begins"* – under {Public Process}

Oct. 19, 05 *"Public Notice Ends"* – under {Public Process"

- [x] Email in house reviewers the newspaper information and public notice dates. If it is contractor, email the contractor directly and cc: OAQCONTRACTOR

- - - - - - - - - END OF PUBLIC NOTICE PROCESSING - - - - - - - - -

----- BEGIN PROPOSED PROCESSING HERE (if applicable) -- ----

Routing slip on Folder will indicate whether the proposed period is 15 or 45 days

- ☐ Request electronic files from the reviewer by email, also letting them know the date EPA Proposed period is expected to end.
- ☐ If Contractor, send email to the permit Contractor letting them know it is approved for Proposed, and the date EPA Proposed period is expected to end. The email should be CC'd to OAQCONTRACTOR email box
- ☐ Convert electronic files into one pdf file
- ☐ Place file in Upload directory

- ☐ Create a folder using the permit number in the "done" directory on the S drive and put all the proposed Word/Word Processing/Excel files in that folder

CAATS:

- ☐ Under {Public Process} *"Proposed Internet Upload"*
- ☐ Under {Public Process} *"Proposed Internet Ends"*

Routing slip will indicate whether comments/changes were made to the draft

- ☐ Under Application/Details/EPA Status/
  Choose from drop down menu based on buckslip, Remember to SAVE

Routing slip will indicate if there were citizen Comments. If there were:

- ☐ Produce "Proposed to EPA" Template from the S drive S:/IGCN/OAM/Common/Admin/Templates
- ☐ check file for names/addresses of citizen commentors. If public hearing, check with Joanne for who to notify from hearing
- ☐ Produce labels for citizen commentors
- ☐ Produce Certificate of Mailing (Form 3877)
- ☐ Send letter to those who commented, copy of letter for folder

Make a note on your calendar on the day Proposed ends. Hold the file at your desk until the proposed period ends.

- ☐ On or before the day proposed period ends, forward to the appropriate person for signature.

----------END OF PROPOSED PROCESSING ----------

- - - - - BEGIN PROCESSING FINAL PERMIT FOR ISSUANCE - - - - -

FEES

☑ Check CAATS database and folder to see if the permit fees have been paid Receipts are attached to the Billing and Refund Worksheet.

☐ **If fees have not been paid**, Produce "Bill Reminder" Template from the S drive S:/IGCN/OAM/Common/Admin/Templates. Use the same address that the original invoice was sent to, and include a copy of the original invoice. Put a copy of the Bill Reminder Letter in the File.

☐ CAATS: {Under Time Clock and Fees} Bill Reminder Letter Mailed

➢ ***Note: Even if fees have not been paid, the permit can be issued once it is signed***

PREP THE DOCUMENTS FOR FINAL ISSUANCE

☑ Quickly page through the hard copy of the permit to make sure there are no hand written notes on any pages
☑ Make sure that "draft" has been removed from the pages
☑ Make sure document is signed and on letterhead
☑ Date the permit
☑ Obtain appropriate Notice of Decision Applicant Cover letter *(see chart last page)* from the S drive at: S:/IGCN/OAM/Common/Admin/Templates

NOTIFICATION

☑ Check the Contact Database to make sure that the Source Contact and Responsible Official are in the Contact Database. If not, add or correct as needed.
☑ Check hanging file to make sure that all who commented are included in contact database.
☑ Use Contact database to:
-produce mailing labels for interested parties
-produce Certificate of Mailing Form (always put FINAL and permit number at the top)
☑ Once the certificate of mailing is produced, convert it to pdf and save it at: S:\IGCN\OAM\COMMON\ADMIN\Mailing sheets. Name it using the permit number and fmail.pdf (for example 12345fmail.pdf)

Make the following paper copies and distribute. NOTE: The "final permit package" should consist of: dated Notice of Decision letter, copy of the of signed/dated final permit and technical documents

☑ Source Contact shown on the permit/ in CAATS: original **signed** final permit package and "How to Appeal" info sheet on colored paper
☑ Responsible Official listed in CAATS (if different) copy of **signed** final permit package and "How to Appeal" info sheet on colored paper

PERMIT PROCESSING: PERMITS THAT REQUIRE PUBLIC NOTICE

- [ ] If Title V/Title V renewal, or FESOP/FESOP renewal, also send to source contact and Responsible Official IDEM's Non-rule policy document: Guidelines for Submitting Annual Compliance Certification
- [ ] Folder: copy of signed permit package, Certificate of Mailing Form and "How to Appeal" info sheet on colored paper
- [ ] Administration Section File Copy (for filing cabinet) copy of signed permit package
- [ ] Consultant/Agent (if applicable) copy of final signed permit package and "How to Appeal" info sheet
- [ ] Reviewer: Final permit package (If Reviewer is a Contractor --- no copy is needed)
- [ ] Library: Library cover letter and Final permit package and "How to Appeal" info
- [ ] Health Department: Final permit package and "How to Appeal" info sheet
- [ ] Each name on Interested parties list: Final permit package and "How to Appeal" info
- [ ] OAQ Compliance Branch marked *"Compliance"* with inspector's initials: Final Permit package; (if Regional Office write which Regional Office)

Convert to pdf and Upload

- [ ] Request electronic files from the Reviewer. (Contractor files on S: drive)
- [ ] Open the electronic files and in the appropriate place type in the date the final permit was issued *(for example "July 1, 2003")* and original signed by BC or AC *(for example "original signed by Paul Dubenetzky")*.
- [ ] Convert all documents to PDF and Upload electronic files. Include dated Notice of Decision letter with upload
- [ ] Create a folder using the permit number in the "done" directory on the S drive and put all the final Word/Word Processing/Excel files in that folder

Distribute electronic copies via e-mail, put the words "permit update" and the Name and Permit Number in the subject line

- [ ] Chet Bohanon, OAQ Programs Branch: pdf copy of the document
- [ ] Sara Cloe, OAQ Compliance Data Section (CDS): pdf copy of the document
- [ ] Local Agency Liaison: send pdf file by email to Mindy Hahn (Note: send all permits to Mindy – she will sort which go to LA)

Enter in CAATS database:

- [ ] Under {Mailings} *"Final Permit Mailed"*
- [ ] Under {General Information} *"Final permit issued"*
- [ ] Under {Public Process} *"Final Internet Upload"*

- [ ] Complete File Room Folder Preparation (see separate checklist)

Notice of Decision Cover Letter Chart

Permit Type & Subtype	Cover Letter
Title V	
Part 70 Operating Permit	FNTVOP
New Source Part 70	FNTVOP
New Source Part 70 PSD	FNTVOP
Significant Source Modification	FNPER
Significant Source Mod PSD	FNPER
Minor Source Modification	FNPER-MOD
Significant Permit Modification	FNTVP-MOD
Minor Permit Modification	FNTVP-MOD
Administrative Amendment	FNPERAM
FESOP	
FESOP	FNPER
New Source FESOP	FNPER
New Source FESOP PSD	FNPER
Significant Permit Revision	FNPER
Significant Permit Rev PSD	FNPER
Minor Permit Revision	FNPER-MOD
Amendment	FNPER-AM
General Permit	FNPER
MSOP	
MSOP	FNPER
New Construction MSOP	FNPER
New Construction MSOP PSD	FNPER
Significant Permit Revision	FNPER
Significant Permit Rev PSD	FNPER
Minor Permit Revision	FNPER-MOD
Notice-Only Change	FNPER-AM
Other	
Exemption including temporary ops/experimental trials	FNPER-AM
Registration	FN-REGIS
Registration Revision	FN-REGIS
Registration Notice-Only	FNPER-AM
SSOA	FNPER
General Permit	FNPER
Interim Permit	FNPER
112 J Applicability Determination	FN-112JDET
Denial Letter	FNPER-DN
Revocation letter	FNPER
Relocation	FNPER-AM
Permit By Rule	NONE
MACT Pre Construction Approval	FNPER
Deactivation letter	FN-Determination
CP Administrative Amendment (goes thru PN)	FN-PER
Acid Rain	
Acid Rain Permit/Permit Renewal	FNPER
Acid Rain Administrative Amendment	FNPER-AM
Acid Rain Modification	FNPER-MOD
Acid Rain Phase 2 NOx	FNPER
Acid Rain Phase 2 SO2	FNPER
Acid Rain Revocation	FNPER-REV

FILE ROOM CHECKLIST

Check off after completed, mark N/A when not applicable

Company Name: U.S. Steel

Permit Number: 089-20118-00121

Permit Application

- [x] New Application Checklist
- [x] Permit Application Forms and supporting documents
- [ ] Copies of EE & GG letters and/or GG Form
- [ ] Administrative NOD letters
- [x] Notice of Deficiency Letter and Responses
- [x] Additional Info
- [x] Combining applications docs

Public Notice Package

- [x] Public Notice (30 day Comment)
- [x] Draft permit
- [ ] Comments
- [x] Applicant Cover Letter
- [x] Newspaper Letter
- [ ] Publisher's Claim (Proof of Publication)
- [x] Library cover letter
- [ ] AOPA List
- [ ] Certificate of Mailing (Form 3877)
- [ ] _____
- [ ] _____

Billing Information

- [x] Billing and Refund Instruction Worksheet
- [ ] OAQ/PeopleSoft Billing Invoice
- [x] Copy of Check Stub or Peoplesoft printout

Final Permit

- [x] Applicant Cover Letter
- [x] Final Permit
- [ ] Addendum to the Technical Support Document
- [x] Technical Support Document
- [ ] Emission Calculations
- [x] Library cover letter
- [ ] AOPA list
- [x] Certificate of Mailing (Form 3877)

Final Permit (continued)

- [x] USPS Sig
- [x] Appeal
- [x] Admin Permit Processing Checklist

☐ ***CONFIDENTIAL MATERIAL (IN-HOUSE CORRESPONDENCE ONLY)***

Compliance Public Notice comments: Recycle, do not send to File Room
Summary checklist: Recycle, do not send to File Room
OAQ Routing Slip: Recycle, do not send to File Room

☐ ***CONFIDENTIAL MATERIAL- CONTRACTORS (IN-HOUSE CORRESPONDENCE ONLY)***

Compliance Public Notice comments: Send to Contracts Section
Summary checklist: Send to Contracts Section
OAQ Routing Slip: Send to Contracts Section

For In-House Staff:

☐ In CAATS, enter File Prepped for File Room (under Administration)
Completed by (your name) forward to (permit Reviewer)

Take the file to the appropriate permit reviewer

For Contractors:

☐ In CAATS, enter File Prepped Routed to File Room (under Administration)
Completed by (your name) forward to (File Clerk)

Put the file in the Contractors – Files to File Room basket

If the application is withdrawn, cancelled, or no action taken

☐ Print out the screen from CAATs that shows why the permit was closed and include with information going to the File Room
☐ Remember to complete CAATS as appropriate

089-21232-00121

United States Steel Corporation
Gary Works
One North Broadway
Gary, IN 46402-3199

Addendum
to 20118

May 24, 2005

SENT VIA FEDERAL EXPRESS

Mack Sims
Permit Engineer, Permit Branch
Office of Air Quality (OAQ)
Indiana Department of Environmental Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46205-6015

Subject: Amendment to Construction Permit Application, No. 14 Blast Furnace Reline Project, U.S. Steel – Gary Works, Construction Permit Application No. CP 089-20118-00121

Dear Mr. Sims:

The purpose of this letter and its attachments is to amend the subject application, which was submitted to OAQ in September 2004. We are requesting that the project be reviewed in the light of evaluating net increases in emissions specified in definitions at the current New Source Review Permit regulations (326 IAC, 2-2 and 2-3).

We have estimated the Projected Actual hot metal production rate at No. 14 Blast Furnace after the reline project. That projected level is 3,252,939 tons per year (9,200 tons per day at 96.8% availability). The baseline actual production rate, as specified in the construction permit application, is 3,040,408 tons per year (8,330 tons per day). Therefore, the unadjusted increase in hot metal production attendant to the project is 212,431 tons per year (projected actual minus baseline actual).

The provisions of Indiana Rule 326 IAC 2-3-1 (mm) (2) (A) (iii) require adjustments to the increase in emissions attendant to the project by excluding that portion of the projected actual emissions that the emission unit could have accommodated during the 24-month baseline period. Such accommodation cannot be related to the project (reline of No. 14 Blast Furnace).

During the baseline period No. 14 Blast Furnace could have accommodated an annual hot metal production rate 3,235,312 tons per year (8,864 tons per day). The difference between the level that could have been accommodated and the baseline actual level is an increase of 194,804 tons per year. In accordance with the aforementioned rule the projected actual level must be decreased by the increase that could have been accommodated. This yields an adjusted projected actual level of 3,058,035 tons per year,

United States Steel Corporation
Gary Works
One North Broadway
Gary, IN 46402-3199

which is an increase of 17,627 tons per year over the baseline actual level. The attached figure illustrates the adjustment of projected actual emissions in accordance with 326 IAC 2-3-1 (mm).

The hot metal production increase of 17,627 tons per year was used in the emissions calculation spreadsheets used to prepare, and presented in the construction permit calculations. The results of the calculations compared to significant emissions increase thresholds are shown in the attached table. The table demonstrates that all of the calculated emissions increases for relevant regulated air pollutants are less than the thresholds. Therefore, the project is not a major modification as defined at 326 IAC 2-3-1 and a New Source Review permit under 326 IAC 2-2 and 2-3 is not required for the project. Consequently, we are requesting a State Construction Permit under the provisions of 326 IAC 2-1.1 for the reline of No. 14 Blast Furnace. The Ambient Air Quality Analysis, Additional Impact Analysis and Best Available Control Technology Analysis presented in the original construction permit application are no longer necessary. We have recently applied for an interim construction permit for the project to enable commencement of construction pending receipt of the requested State Construction Permit.

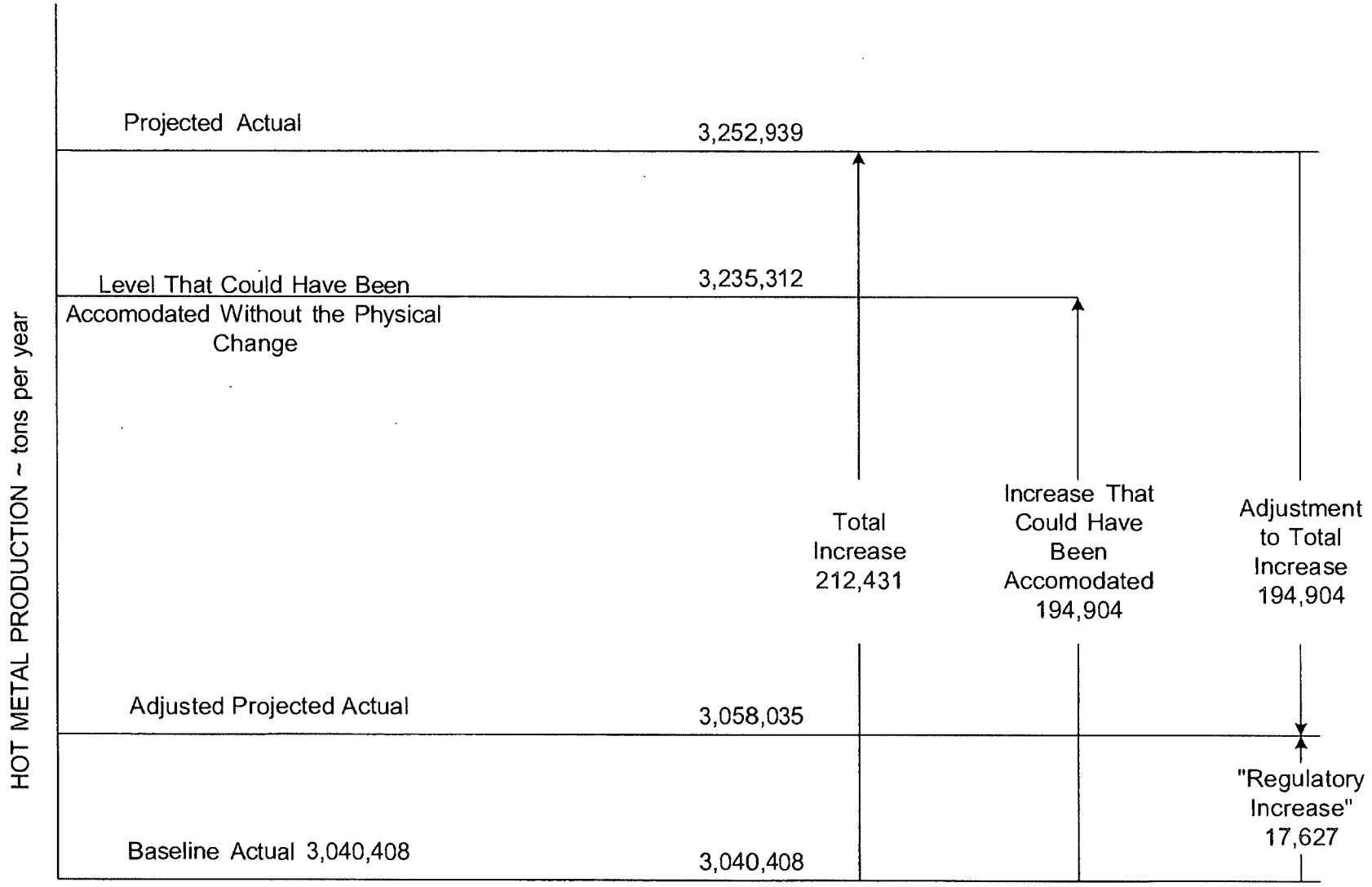
Please contact me with any comments or questions concerning this matter.

Sincerely,

James Alexander
Manager, Environmental Air Compliance

Attachments

U.S. STEEL - GARY WORKS
NO. 14 BLAST FURNACE RELINE PROJECT
HOT METAL PRODUCTION LEVELS RESULTING FROM THE PROJECT



U.S. STEEL - GARY WORKS
NO. 14 BLAST FURNACE RELINE PROJECT
CONSTRUCTION PERMIT APPLICATION
FOR 17,627 TONS/YR HOT METAL THROUGHPUT INCREMENT

Estimated Increases in Emissions of Relevant Regulated Air Pollutants Compared to Significant Emissions (Major Source Modification) Thresholds

Pollutant	Estimated Emissions Increases tons/yr		Significant Emissions Thresholds tons/yr
	Case I[(1)]	Case II[(1)]	
Particulate Matter (PM)	6.948	14.638	25
Particulate Matter (PM_{10})	5.578	14.257	15
Sulfur Dioxide (SO_2)	10.203	10.203	40
Oxides of Nitrogen (NOx)	2.415	2.446	40
Carbon Monoxide (CO)	96.791	99.017	100
Volatile Organic Compounds (VOC)	0.054	0.054	15.44[(2)]
Lead (Pb)	0.0034	0.006	0.6
Hydrogen Sulfide (H_2S)	0.357	0.357	10
Fluorides (F)	0.107	0.107	3
Beryllium (Be)	4.4E-08	4.4E-08	0.0004
Mercury (Hg)	1.1E-06	1.2E-05	0.1
Individual HAP	0.042	0.212	10
Total HAPs	0.122	0.300	25

(1) Assumes all additional hot metal produced at No. 13 Blast Furnace is processed through:

Case I - No. 1 BOP Shop
Case II - No. 2 Q-BOP Shop

(2) Remainder in the USS - Gary Works VOC Diminimis Account prior to the No. 13 Blast Furnace Reline Project (total of all previous increases) in calendar years 2000 through 2004 to date. Total increases including project is less than 25 tons VOC/yr major source modification threshold in severe ozone non-attainment area.

From: Origin ID: (219)888-3387
Jim Alexander
U.S. STEEL
ONE NORTH BROADWAY
TS 576
GARY, IN 46402

FedEx Express

Ship Date: 24MAY05
Actual Wgt: 1 LB
System#: 5313910/INET2000
Account#: S *********

REF: 181-70100

Delivery Address Bar Code

SHIP TO: (317)232-8217 BILL SENDER
Paul Dubenetzky
Indiana Dept of Env. Management
100 N. Senate Ave.

Indianapolis, IN 46204

PRIORITY OVERNIGHT

WED
Deliver By:
25MAY05

TRK# 7929 3095 0901 FORM 0201

IND A1

46204 -IN-US

NR GSHA

Shipping Label: Your shipment is complete

1. Use the 'Print' feature from your browser to send this page to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

November 10, 2004

Mr. James Alexander
U.S. Steel – Gary Works
One North Broadway
Gary, Indiana 46206

Re: Construction Permit Application
CP 089-20118; ID 089-00121
Notice of Deficiency #1

Dear Mr. Alexander:

Your application to reline the No. 13 Blast Furnace at U.S. Steel – Gary Works located at One North Broadway, Gary Indiana was received on September 28, 2004. The application contains insufficient data for a complete review. Please submit the following:

(a) In your netting analysis, please include all contemporaneous increases and decreases occurring at the source within the last five (5) years. This also includes increases and decreases resulting from contractor modifications.

(b) The final rule for National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63 Subpart DDDDD was published in the Federal Register on September 13, 2004. Please address 40 CFR Subpart DDDDD applicability in your application.

(c) Please provide a detailed cost analysis for Table 8-3 "Spray Dryer Absorption Process" including percent (%) interest rate and a manufacturer letter of vendor quote for the 40% estimated control efficiency.

(d) Please provide electronic copies of calculation spreadsheets included with the application. This will facilitate including this information in the permit supporting documentation.

(e) Please address condensable PM_{10} emissions in your BACT analysis for particulate matter.

(f) Please resubmit the BACT forms identifying the top five (5) BACT determinations for each facility/pollutant.

In order to expedite the processing of your application, please provide your written response to this notice of deficiency (NOD) letter within thirty (30) days of receipt of this letter.

If you are unable to provide the requested information within thirty (30) days or if you have questions regarding this requested information, please contact me at 317/233-0867 or at 1-800-451-6027 ext. 3-0867. If the Office of Air Quality (OAQ) does not receive the additional information requested within thirty (30) days or you have not asked requested an extension of time to respond to the request, OAQ may be forced to make a decision on your permit application based on the information currently submitted.

Note that the time period accountability is suspended pending receipt by OAQ of your completed response to this NOD #1, pursuant to IC 13-15-4-10. If additional questions arise as the review proceeds, OAQ will contact you.

Please attach a copy of this letter to your response.

Sincerely,

Mack Sims

Mack Sims, Environmental Engineer
Permits Review Section 2
Office of Air Quality

MS
cc: File – Lake County
Northwest Regional Office
Air Compliance – Dave Sampias

CHECKLIST FOR NOD's (NOTICE OF DEFICIENCY)

Check off when completed, mark N/A when not applicable

COMPANY NAME: US Steel - Gary Works

PERMIT NUMBER: 089 - 20118 - 00121

- [x] Receive Notice of Deficiency in a **pink** folder, make sure it is signed
- [x] Make sure it says Notice of Deficiency 1, 2, or 3 on letter
- [x] Make sure all "copies enclosed" are included
- [x] Date letter
- [x] Make 4 copies
- [x] Distribute:
  - [x] Original plus 1 copy to Applicant, (include any enclosures)
  - [x] 1 copy to Permit Reviewer
  - [x] 1 copy to OAM Compliance Branch (ACS) – with inspector's name
  - [x] 1 copy to Regional Office, if applicable.
  - [x] 1 copy to Pink folder, with this checklist
- [x] Enter in CAATS database: "NOD Mailed"
- [x] Place **pink** folder in appropriate hanging file

IEMC

Industrial Environmental Management Consultants, Inc.

January 03, 2005

SENT VIA E-MAIL AND CERTIFIED MAIL

Mr. Mack Sims
Environmental Engineer
Permits Branch, Office of Air Quality
Indiana Department of Environmental Management
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

Subject: **Construction Permit Application, CP 089-20118 ID 089-00121 - Notice of Deficiency #1, No. 13 Blast Furnace Reline, U.S. Steel – Gary Works**

Reference: **Letter, Mack Sims to James Alexander, Same Subject, dated November 9, 2004 (attached)**

Dear Mr. Sims:

This is in response to Item (c) in the referenced letter. Our previous response provided the "% interest rate" (i.e., time value of money) used in the cost estimate presented in Table 8-3 "Spray Dryer Absorption Process" as part of the BACT Analysis. The estimated SO_2 abatement cost is predicated on a capital cost of $500,000 and an estimated 40% SO_2 control efficiency. The attached letter explains the equipment supplier's technical basis for the low control efficiency and the high abatement cost for SO_2 reductions at the No.13 Blast Furnace Casthouse.

We trust that this information addresses the issue. Please contact Jim Alexander at (219) 888-3387 or me at (219) 929-4487 with any additional comments or questions.

Very truly yours,
IEMC, Inc.

Ernest W. Brix Jr.
PRESIDENT

EWB/cfh

Attachments

cc: James Alexander

Telephone
(219) 929-4487

804 Wabash Avenue
Chesterton, Indiana 46304

Fax
(219) 929-4105

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

Mr. James Alexander
U.S. Steel – Gary Works
One North Broadway
Gary, Indiana 46206

Re: Construction Permit Application
CP 089-20118, ID 089-00121
Notice of Deficiency #1

Dear Mr. Alexander:

Your application to reline the No. 13 Blast Furnace at U.S. Steel – Gary Works located at One North Broadway, Gary Indiana was received on September 28, 2004. The application contains insufficient data for a complete review. Please submit the following:

(a) In your netting analysis, please include all contemporaneous increases and decreases occurring at the source within the last five (5) years. This also includes increases and decreases resulting from contractor modifications.

(b) The final rule for National Emission Standards for Hazardous Air Pollutants (NESHAP) for Industrial, Commercial, and Institutional Boilers and Process Heaters, 40 CFR 63 Subpart DDDDD was published in the Federal Register on September 13, 2004. Please address 40 CFR Subpart DDDDD applicability in your application.

(c) Please provide a detailed cost analysis for Table 8-3 "Spray Dryer Absorption Process" including percent (%) interest rate and a manufacturer letter of vendor quote for the 40% estimated control efficiency.

(d) Please provide electronic copies of calculation spreadsheets included with the application. This will facilitate including this information in the permit supporting documentation.

(e) Please address condensable PM_{10} emissions in your BACT analysis for particulate matter.

(f) Please resubmit the BACT forms identifying the top five (5) BACT determinations for each facility/pollutant.

In order to expedite the processing of your application, please provide your written response to this notice of deficiency (NOD) letter within thirty (30) days of receipt of this letter.

If you are unable to provide the requested information within thirty (30) days or if you have questions regarding this requested information, please contact me at 317/233-0867 or at 1-800-451-6027 ext. 3-0867. If the Office of Air Quality (OAQ) does not receive the additional information requested within thirty (30) days or you have not asked requested an extension of time to respond to the request, OAQ may be forced to make a decision on your permit application based on the information currently submitted.

Note that the time period accountability is suspended pending receipt by OAQ of your completed response to this NOD #1, pursuant to IC 13-15-4-10. If additional questions arise as the review proceeds, OAQ will contact you.

Please attach a copy of this letter to your response.

Sincerely,

Original Signed by Mack Sims

Mack Sims, Environmental Engineer
Permits Review Section 2
Office of Air Quality

MS
cc: File – Lake County
Northwest Regional Office
Air Compliance – Dave Sampias

LOPATA TECHNICAL SERVICE CORP.

E-Mail: lopatatechservice@ameritech.net

December 3, 2004

Mr. Ernest W. Brix, Jr.
President
Industrial Environmental Management Consultants, Inc.
804 Wabash Avenue
Chesterton , IN 46304

(219) 929-4487
FAX (219) 929-4105
E-Mail: Ernest.Brix@IEMC1.com

US STEEL / GARY WORKS
#13 BLAST FURNACE CAST HOUSE
POTENTIAL EMISSIONS CONTROL SYSTEM
FOR SULFUR DIOXIDE

Dear Ernie:

Thank you for your call earlier today ... asking me to review the information that we discussed in the July / August , 2004 time-frame concerning possible modifications to the current particulate (PM_{10}) air emissions control system on the Number 13 Blast Furnace Cast House (Caster) at US Steel / Gary Works.

As we discussed, the original PM_{10} system was installed by Wheelabrator Air Pollution Control, Inc. of Pittsburgh , PA under a contract with Eichleay Engineers (Wheelabrator Contract Number 20-3387) in the 1993 / 94 time frame. I was the Wheelabrator representative at that time and am still the "local representative" for Wheelabrator Air Pollution Control, Inc. and Wheelabrator Canada Company.

The original installation at the #13 Blast Furnace Cast House (Caster) includes a mass cooler to control the temperature of the particulate laden gases going into the baghouse followed by a dust collector / baghouse to control the particulate. The mass cooler works by convective heat transfer from the hot air stream to a series of heavy / massive steel plates that are spaced fairly close together. The plates store heat energy until the casting operation is completed. When the casting is completed, cool air is passed over the plates – cooling the plates, again, by convection. The mass of the plates controls spikes in temperature and protects the baghouse from temperature upsets and spark / fires that could render it useless. The mass cooler is necessary to the proper operation of the fourteen-module Wheelabrator JET III Model 1918-TA-(SB)-168-6P baghouse that controls the particulate emissions from the caster operations.

During our discussions in July / August , 2004: you asked about controlling the sulfur dioxide (SO_2) emissions from the #13 Blast Furnace Cast House (Caster). I reviewed this application with the Vice President of Technology for Wheelabrator Air Pollution Control, Inc. We discussed the possible use of lime injection systems (such as Spray Dryer / Absorber or Dry Sorbent Reactors) to reduce the SO_2 .

In terms of acid gas reduction, the best performance would be at high temperatures (in front of the mass cooler) – using a Spray Dryer / Absorber. The high temperature (typically in the 350-400° F range) evaporates the excess water in a lime slurry and dries the lime slurry to lime particulate. This spray drying cools the air stream and does an excellent job of neutralizing acid gases such as sulfur dioxide. Unfortunately, injecting large amounts of lime in front of the mass cooler plates (whether in a Spray Dryer / Absorber or a Dry Sorbent Reactor) would probably result in plugging the spaces between the plates and rendering the mass cooler useless as well as stopping the air flow to the baghouse. This is not acceptable, and is not recommended.

The suggested "solution" to remove sulfur dioxide (SO_2) from the target air stream is to put a lime injection system behind the mass cooler --- in front of the dust collector / baghouse. At this point in the system, the temperature of the target air stream is fairly well controlled by the mass cooler at about 250° F – which is too low for a Spray Dryer / Absorber to function properly.

The most efficient method to remove sulfur dioxide (SO_2) from the target air stream at 250° F would be to use a Dry Sorbent Reactor. The estimated size of this Dry Sorbent Reactor would be a tower about 22-feet in diameter X about 120-feet tall. Unfortunately, this reaction tower will not fit into the space available at the #13 Caster at US Steel / Gary Works ... so it cannot realistically be considered further.

The next most efficient system would be to use direct lime injection into the ductwork. For a "normal" dry lime injection system, the lime is typically injected into the ductwork at a location where there would be enough reaction time and adequate mixing to accomplish a reasonably high acid gas (SO_2) removal efficiency. With the very short run of ductwork between the mass cooler and the existing baghouse: Wheelabrator Air Pollution Control, Inc. is very doubtful that good mixing of the lime reagent and the SO_2 laden air stream can be achieved or that adequate reaction time can be provided to achieve a reasonably high removal efficiency ... but this is about the only system that can be fit into the available space and that will not upset the other processes that are controlling other target pollutants. The budgetary cost for this dry lime injection system (injection nozzle grid, air conveying system, lime storage silo) is about $ 500,000.

At the relatively low temperature behind the mass cooler (250° F), the technical staff at Wheelabrator Air Pollution Control, Inc. has estimated that the best SO_2 removal efficiency that can be achieved is on the order of only 40%. This means that the current emissions level of about 125 pounds per hour of sulfur-dioxide will be reduced to about 75 pounds per hour. In order to achieve this 40% reduction in SO_2 , (because of the relatively low temperature of the target gas stream) US Steel / Gary Works will need to inject somewhere between 1,000 and 2,000 pounds per hour of lime into the ductwork between the mass cooler and the existing Wheelabrator baghouse. At the current cost for lime of about $ 100 per ton, this is an additional operating cost

on the order of $50 - $100 per hour plus utility and maintenance costs for a reduction of about 50 pounds per hour of SO_2 .

Considering the high capital and operating costs for a relatively low removal efficiency of sulfur dioxide, I think that this project is highly questionably. If, however, US Steel / Gary Works finds that these costs can be justified, please call me and I can arrange for Wheelabrator Air Pollution Control, Inc. to provide firm quotations on either the supply of the equipment (only) or on the supply and installation of the equipment. Please call me if you have any questions, or if I can be of further assistance on this potential project.

Jim Lopata

Jim Lopata
Lopata Technical Service Corporation
Representing Wheelabrator Air Pollution Control, Inc.

CERTIFIED MAIL™

7004 0550 0000 0663 6307

UNITED STATES POSTAL SERVICE

S26i

46206

U.S. POSTAGE
PAID
CHESTERTON, IN
46304
JAN 04, '05
AMOUNT

$4.65
00068819-24

RETURN RECEIPT REQUESTED

First Class Mail

IEMC

IEMC, Inc.
804 Wabash Avenue
Chesterton, IN 46304

Mr. Mack Sims
Environmental Engineer
Permits Branch, Office of Air Quality
Indiana Department of Environmental Mangt.
100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015

PRO FORMA

PLEASE REMIT TO:

INDIANA DEPT OF ENVIRONMENTAL MGMT
CASHIER OFFICE - MAIL CODE 50-10C
100 NORTH SENATE AVENUE
INDIANAPOLIS IN 46204

Customer

US STEEL-GARY WORKS
JAMES ALEXANDER
ONE NORTH BROADWAY STREET
MAIL STATION 70-A
GARY IN 46402

Page:	1
Invoice No:	000045563
Status/Type:	NEW/Regular
Invoice Date:	09/19/2005
Customer Number:	CST100001138
Bill Type:	008
Payment Terms:	NET 30
Est. Due Date:	10/31/2005

AMOUNT DUE: 3,400.00 USD

Amount Remitted

☐ Note Address Changes Above.

For billing questions, please call 317-233-0604

Line	Adj Identifier	Description	Quantity	UOM	Unit Amt	Net Amount
		The Office of Air Quality (OAQ) has received your application for a Significant Source Modification permit for U.S. Steel-Gary Works. Before review of this application can be completed, please submit permit fee required by 326 IAC 2-1.1-7.				
		-				
		If OAQ does not receive the fee within thirty (30) days or you have not requested an extension of time, your permit can be denied or revoked. Time period accountability is suspended pending receipt by OAQ pursuant to IC 13-15-4-10.				
		-				
		For questions regarding how your fees were determined, please contact Iryn Calilung in Indiana at 800-451-6027, then ask for extension 3-5692 or outside of Indiana call 317-233-5692.				
		-				
		Air permit fee billing does not constitute approval to construct or operate.				
		-				
		- PLEASE NOTE NEW REMIT TO ADDRESS ABOVE.				
1	089-20118-00121	Significant Source Mod	1.00			3,500.00
2	089-20118-00121	Your Credit	1.00			(100.00)

TOTAL AMOUNT DUE : **3,400.00**

Please include a copy of your invoice along with payment.
Payments received without a copy of original invoice or invoice number noted on the check will be returned.

OK BKW 9-19-2005

PeopleSoft BI

PRO FORMA SUMMARY - SELECTED BILLS

Report ID: SOIBI012
Report Action: PRO FORMA

Run Date 09/19/2005
Run Time 10:40:06

Business Unit	Number of Bills	Total Invoice Amount	Currency
00495	1	3,400.00	USD

Total number of bills printed: 1

BILLING AND REFUND WORKSHEET #1

Permit Reviewer: Ingrid Callaway Date: 9/7/05
Filing Fee Bill: ___ Permit Fee Bill ___ Refund ___

Tracking and Plant Id Number: 089-20118-00121 Date Application Received: 09/24/04

Company Name: U.S. Steel - Gary Works
Responsible Official: James Alexander
Mailing Address: One North Broadway
Gary, IN 46206
Facility:
Description:

CST 100001138
IDN 00004555 63

Credit for filing fee:	Date Rec'd: 09/24/04	Amount	$ 100.00
Credit for add. Fees:	Date Rec'd: 09/24/04	Amount	$ 500.00
Credit for add. Fees:	Date Rec'd: ___/___/___		
	Total Credit:		**$ 100.00**

Permit Reviewer: Please check off applicable fees on following page.

Total Permitting and Filing Fees Applicable $ 3,500

Total Permitting and Filing Fees Applicable	$ 3,500
Total Credit	$ 100
Total Due	$ 3,400

Total Refund Due: $ _____
Reason for Refund:

_____

_____

Refund to person, company, address: _____

_____

Permit Reviewer ___ Date ___/___/___ **Supervisor** ___ Date ___/___/___

BILLING AND REFUND WORKSHEET #2

Permit Reviewer: Tryn Castlung
Filing Fee Bill: ___ Permit Fee Bill ___
Date: 9/7/05
Refund ___

Permit Reviewer: Please check off applicable fees and total to the right.

US Steel
089-20118

TITLE V Fees	*Account # 2760/410500/150000*	*Dollar Amount*
__ $100 for New Source Part 70 Filing (120 days)		$
__ $3,500 for New Source Part 70 Permit & Filing fee (120 days)		$
__ $100 for New Source Part 70 PSD Filing (270 days)		$
__ $6,000 for New Source Part 70 PSD Permit & Filing (270 days)		$
1 $3,500 for Significant Source Modification Permit (120 days)		$ 3,500
__ $6,000 for Significant Source Modification PSD Permit (270 days)		$
__ $500 for Part 70 Minor Source Modification (45 days)		$
__ $500 for Part 70 Interim Filing (15 days)		$

FESOP Fees	*Account # 2760/410400/150000*	
__ $3,000 for FESOP Filing (270 days)		$
__ $100 for New Source Filing (120 days)		$
__ $3,500 for New Source Permit & Filing (120 days)		$
__ $100 for New Source PSD Filing (270 days)		$
__ $6,000 for New Source PSD Permit & Filing (270 days)		$
__ $3,500 for Significant Permit Revision (120 days)		$
__ $6,000 for Significant Permit Revision PSD (270 days)		$
__ $500 for Minor Permit Revision (45 days)		$
__ $500 for General Permit (270 days)		$
__ $100 for Renewal with new Construction Filing		$
__ $3,500 for Renewal with new Construction Permit & Filing		$

MSOP Fees	*Account # 3240/411100/140600*	
__ $100 for MSOP Filing		$
__ $100 for New Construction Filing (120 days)		$
__ $3,500 for New Construction Permit & Filing (120 days)		$
__ $100 for New Construction PSD Filing (270 days)		$
__ $6,000 for New Construction PSD Permit & Filing (270 days)		$
__ $100 for Significant Permit Revision Filing (120 days)		$
__ $3,500 for Significant Permit Revision Permit & Filing (120 days)		$
__ $100 for Significant Permit Revision PSD Filing (270 days)		$
__ $6,000 for Significant Permit Revision PSD Permit & Filing (270 days)		$
__ $100 for Minor Permit Revision Filing (45 days)		$
__ $500 for Minor Permit Revision Permit (45 days)		$
__ $500 for Interim Filing (15 days)		$
__ $100 for Construction Relocation Filing (30 days)		$
__ $100 for Exemption Review Filing (N/A)		$
__ $100 for Registration Filing (60 days)		$
__ $100 for Registration Revision Filing (45 days)		$
__ $500 for Registration Permit (60 days)		$
__ $500 for Registration Revision Permit (45 days)		$

Other Fees	*Account # 2760/410500/150000*	
__ $500 for SSOA Filing (60 days)		$
__ $500 for General Permit Filing (120 days)		$
__ $100 for SSOA Relocation Filing (30 days)		$
__ $500 for a Public Hearing		$

Air Quality Impact Study Review	*(Account # is dependent on Source)*	
__ $3,500 if applicant does analysis, or		$
__ times $6,000 per pollutant if OAQ does analysis		$
PSD BACT or LAER Review	*(Account # is dependent on Source)*	
__ $3,000 for 2 to 5 Review Analyses, or		$
__ $6,000 for 6 to 10 Review Analyses, or		$
__ $10,000 for 11 or more Review Analyses		$
Additional Fees	*(Account # is dependent on Source)*	
__ times $500 for each NSPS Review equals		$
__ times $500 for each NESHAP Review equals		$
__ times $600 for each 326 IAC 8-1-6 BACT Review		$
__ $ _____ for Conversion from _____ to _____.		$

Total Permitting and Filing Fees Applicable $ 3,500

09/01/01

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC. AV/MS

12773

Cashier - Indiana Department of Env. Mgt 9/22/2004

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
09/22/2004	Bill		100.00	100.00		100.00
					Check Amount	100.00

U.S. Steel - Gary Works
- 20118 -

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC.

12773

U.S. Steel - Gary Works
089. 20118 - 00121

RECEIVED
SEP 2 4 2004
State of Indiana
Department of Environmental Management
Office of Air Quality

COPY

12773

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC.
804 WABASH AVE.
CHESTERTON, IN 46304
PH. 219-929-4487

BANK ONE, NA
INDIANAPOLIS, INDIANA 46277
20-1-740

9/22/2004

DATE AMOUNT

Cashier - Indiana Department of Env. Mgt **100.00

PAY
TO THE ORDER OF One Hundred and 00/100**********

Indiana Department of Environmental Mgt
100 North Senate Ave
Indianapolis, Indiana 46204

Security Features Included. Details on back.

⑈012773⑈ ⑆074000010⑆ 18501020511 9⑈

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC.

12773

Cashier - Indiana Department of Env. Mgt 9/22/2004

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
09/22/2004	Bill		100.00	100.00		100.00
					Check Amount	100.00

#089-20118-00121

BILLING AND REFUND WORKSHEET #1

Permit Reviewer: _____ Date: ___/___/___
Filing Fee Bill: ___ Permit Fee Bill ___ Refund ___

Tracking and Plant Id Number: 089-21298-00121 Date Application Received: 06/09/2005

Company Name: US Steel - Gary Works
Responsible Official: Ken Parcels
Mailing Address: 1 N. Broadway Street
Gary, IN 46402
Facility:
Description:

Credit for filing fee:	Date Rec'd:	$ 0
Credit for add. Fees:	Date Rec'd:	$ 0
Credit for add. Fees:	Date Rec'd:	$
Total Credit:		**$ 0**

Permit Reviewer: Please check off applicable fees on following page.

Total Permitting and Filing Fees Applicable $ _____

Total Permitting and Filing Fees Applicable	$ _____
Total Credit	$ _____
Total Due	$ _____

Total Refund Due: $ _____
Reason for Refund: _____

_____

Refund to person, company, address: _____

_____

Permit Reviewer ___ Date ___/___/___ **Supervisor** ___ Date ___/___/___

BILLING AND REFUND WORKSHEET #2

Permit Reviewer: _____ Date: ___/___/___
Filing Fee Bill: ___ Permit Fee Bill ___ Refund ___

Permit Reviewer: Please check off applicable fees and total to the right.

TITLE V Fees ***Account # 2760/410500/150000***	***Dollar Amount***
__ $100 for New Source Part 70 Filing (120 days)	$ _____
__ $100 for New Source Part 70 PSD Filing (270 days)	$ _____
__ $500 for Part 70 Interim Filing (15 days)	$ _____
__ $500 for Part 70 Minor Source Modification (45 days)	$ _____
__ $3,500 for New Source Part 70 Permit & Filing fee (120 days)(filing fee applies to this fee)	$ _____
__ $3,500 for Significant Source Modification Permit (120 days)(filing fee applies to this fee)	$ _____
__ $6,000 for New Source Part 70 PSD Permit & Filing (270 days)(filing fee applies to this fee)	$ _____
__ $6,000 for Significant Source Modification PSD Permit (270 days)(filing fee applies to this fee)	$ _____
FESOP Fees ***Account # 2760/410400/150000***	$ _____
__ $100 for Renewal with new Construction Filing	$ _____
__ $500 for General Asphalt Permit (270 days)	$ _____
__ $500 for Interim Filing (15 days)	$ _____
__ $500 for Minor Permit Revision (45 days)	$ _____
__ $100 for New Source PSD Filing (270 days)	
__ $3,000 for FESOP Filing (270 days)	
__ $100 for New Source Filing (120 days)	
__ $3,500 for New Source Permit & Filing (120 days)	$ _____
__ $3,500 for Renewal with new Construction	$ _____
__ $3,500 for Significant Permit Revision (120 days)(filing fee applies to this fee)	$ _____
__ $6,000 for New Source PSD Permit & Filing (270 days)(filing fee applies to this fee)	$ _____
__ $6,000 for Significant Permit Revision PSD (270 days)(filing fee applies to this fee)	$ _____
MSOP Fees ***Account # 3240/411100/140600***	
__ $100 for Construction Relocation Filing (30 days)	$ _____
__ $100 for Minor Permit Revision Filing (45 days)	$ _____
__ $500 for Interim Filing (15 days)	
__ $100 for MSOP Filing	$ _____
__ $100 for New Construction Filing (120 days)	$ _____
__ $6,000 for New Construction PSD Permit & Filing (270 days) (filing fee applies to this fee)	
__ $3,500 for New Construction Permit & Filing (120 days) (filing fee applies to this fee)	
__ $100 for New Construction PSD Filing (270 days)	$ _____
__ $100 for Significant Permit Revision Filing (120 days)	$ _____
__ $3,500 for Significant Permit Revision Permit & Filing (120 days) (filing fee applies to this fee)	
__ $100 for Significant Permit Revision PSD Filing (270 days)	
__ $500 for Minor Permit Revision Permit (45 days)	
Registration/Exemption Fees **Account # 3240/411100/140600**	$ _____
__ $100 for Exemption Review Filing (N/A)	
__ $100 for Registration Filing (60 days)	$ _____
__ $500 for Registration (60 days) – new source subject to 326 IAC 2-5.1-2 filing fee does <u>not</u> apply to this fee)	$ _____
Other Fees ***Account # 2760/410500/150000***	
__ $500 for a Public Hearing	$ _____
__ $500 for General Permit Filing (120 days)	$ _____
__ $100 for Re-Registration Filing (326 IAC 2-5.5-2)	$ _____
__ $100 for SSOA Relocation Filing (30 days)	$ _____
__ $500 for SSOA Filing (60 days)	$ _____
__ $500 for 2 or more SSOAs from the same company	$ _____
Transition Fees **See Account #s below:**	
__ $1,000 Transition from Title V to FESOP **Account #2760/410400/150000**	$ _____
__ $500 Transition from Title V to SSOA **Account #2760/410500/150000**	$ _____
__ $500 Transition from FESOP to SSOA **Account #2760/410500/150000**	$ _____
Air Quality Impact Study Review (Account # is dependent on Source)	
__ $3,500 if applicant does analysis, or	$ _____
__ times $6,000 per pollutant if OAQ does analysis	$ _____
PSD BACT or LAER Review (Account # is dependent on Source)	
__ $3,000 for 2 to 5 Review Analyses, or	$ _____
__ $6,000 for 6 to 10 Review Analyses, or	$ _____
__ $10,000 for 11 or more Review Analyses	
Additional Fees (Account # is dependent on Source)	
__ times $500 for each NSPS Review equals	$ _____
__ times $500 for each NESHAP Review equals	$ _____
__ times $600 for each 326 IAC 8-1-6 BACT Review	
Total Permitting and Filing Fees Applicable updated 5/13/05	**$** _____

#089-20118-00121

BILLING AND REFUND WORKSHEET #1

Permit Reviewer: _____ Date: ___/___/___
Filing Fee Bill: ___ Permit Fee Bill ___ Refund ___

Tracking and Plant Id Number: 089-21232-00121 Date Application Received: 05/25/2005

Company Name: U.S. Steel - Gary Works
Responsible Official: James Alexander
Mailing Address: 1 N. Broadway Street
Gary, IN 46402
Facility:
Description:

Credit for filing fee:	Date Rec'd:	$ 0
Credit for add. Fees:	Date Rec'd:	$ 0
Credit for add. Fees:	Date Rec'd:	$
Total Credit:		**$ 0**

Permit Reviewer: Please check off applicable fees on following page.

Total Permitting and Filing Fees Applicable $ _____

Total Permitting and Filing Fees Applicable	$ _____
Total Credit	$ _____
Total Due	$ _____

Total Refund Due: $ _____
Reason for Refund: _____

_____

Refund to person, company, address: _____

_____

Permit Reviewer ___ Date ___/___/___ **Supervisor** ___ Date ___/___/___

BILLING AND REFUND WORKSHEET #2

Permit Reviewer: _____ Date: ___/___/___
Filing Fee Bill: ___ Permit Fee Bill ___ Refund ___

Permit Reviewer: Please check off applicable fees and total to the right.

TITLE V Fees ***Account # 2760/410500/150000***	***Dollar Amount***
__ $100 for New Source Part 70 Filing (120 days)	$ _____
__ $100 for New Source Part 70 PSD Filing (270 days)	$ _____
__ $500 for Part 70 Interim Filing (15 days)	$ _____
__ $500 for Part 70 Minor Source Modification (45 days)	$ _____
__ $3,500 for New Source Part 70 Permit & Filing fee (120 days)(filing fee applies to this fee)	$ _____
__ $3,500 for Significant Source Modification Permit (120 days)(filing fee applies to this fee)	$ _____
__ $6,000 for New Source Part 70 PSD Permit & Filing (270 days)(filing fee applies to this fee)	$ _____
__ $6,000 for Significant Source Modification PSD Permit (270 days)(filing fee applies to this fee)	$ _____
FESOP Fees ***Account # 2760/410400/150000***	$ _____
__ $100 for Renewal with new Construction Filing	$ _____
__ $500 for General Asphalt Permit (270 days)	$ _____
__ $500 for Interim Filing (15 days)	$ _____
__ $500 for Minor Permit Revision (45 days)	$ _____
__ $100 for New Source PSD Filing (270 days)	
__ $3,000 for FESOP Filing (270 days)	
__ $100 for New Source Filing (120 days)	
__ $3,500 for New Source Permit & Filing (120 days)	$ _____
__ $3,500 for Renewal with new Construction	$ _____
__ $3,500 for Significant Permit Revision (120 days)(filing fee applies to this fee)	$ _____
__ $6,000 for New Source PSD Permit & Filing (270 days)(filing fee applies to this fee)	$ _____
__ $6,000 for Significant Permit Revision PSD (270 days)(filing fee applies to this fee)	$ _____
MSOP Fees ***Account # 3240/411100/140600***	
__ $100 for Construction Relocation Filing (30 days)	$ _____
__ $100 for Minor Permit Revision Filing (45 days)	$ _____
__ $500 for Interim Filing (15 days)	
__ $100 for MSOP Filing	$ _____
__ $100 for New Construction Filing (120 days)	$ _____
__ $6,000 for New Construction PSD Permit & Filing (270 days) (filing fee applies to this fee)	
__ $3,500 for New Construction Permit & Filing (120 days) (filing fee applies to this fee)	
__ $100 for New Construction PSD Filing (270 days)	$ _____
__ $100 for Significant Permit Revision Filing (120 days)	$ _____
__ $3,500 for Significant Permit Revision Permit & Filing (120 days) (filing fee applies to this fee)	
__ $100 for Significant Permit Revision PSD Filing (270 days)	
__ $500 for Minor Permit Revision Permit (45 days)	
Registration/Exemption Fees Account # 3240/411100/140600	$ _____
__ $100 for Exemption Review Filing (N/A)	
__ $100 for Registration Filing (60 days)	$ _____
__ $500 for Registration (60 days) – new source subject to 326 IAC 2-5.1-2 filing fee does not apply to this fee)	$ _____
Other Fees ***Account # 2760/410500/150000***	
__ $500 for a Public Hearing	$ _____
__ $500 for General Permit Filing (120 days)	$ _____
__ $100 for Re-Registration Filing (326 IAC 2-5.5-2)	$ _____
__ $100 for SSOA Relocation Filing (30 days)	$ _____
__ $500 for SSOA Filing (60 days)	$ _____
__ $500 for 2 or more SSOAs from the same company	$ _____
Transition Fees See Account #s below:	
__$1,000 Transition from Title V to FESOP **Account #2760/410400/150000**	$ _____
__ $500 Transition from Title V to SSOA **Account #2760/410500/150000**	$ _____
__ $500 Transition from FESOP to SSOA **Account #2760/410500/150000**	$ _____
Air Quality Impact Study Review (Account # is dependent on Source)	
__ $3,500 if applicant does analysis, or	$ _____
__ times $6,000 per pollutant if OAQ does analysis	$ _____
PSD BACT or LAER Review (Account # is dependent on Source)	
__ $3,000 for 2 to 5 Review Analyses, or	$ _____
__ $6,000 for 6 to 10 Review Analyses, or	$ _____
__ $10,000 for 11 or more Review Analyses	
Additional Fees (Account # is dependent on Source)	
__ times $500 for each NSPS Review equals	$ _____
__ times $500 for each NESHAP Review equals	$ _____
__ times $600 for each 326 IAC 8-1-6 BACT Review	
Total Permitting and Filing Fees Applicable updated 5/13/05	**$** _____

From: CATHY ALLISON
To: COLLEEN WILLIAMSON
Date: 9/20/05 3:38PM
Subject: Fwd: CST100001138/Inv. 000045563 US Steel - Gary Works 089-20118-00121

Colleen,

Your Invoice # 000045563 (pdf copy attached) has been generated and placed in the mail.

Have a great day!

Cathy Allison
Billing Coordinator
(317) 234-1431
callison@idem.in.gov

CC: CHRISTI BUNCH; Dionne Stewart; GLORIA ELEY; PAMELA WAY

United States Steel Corporation
Gary Works
One North Broadway
Gary, IN 46402-3199

089. 20118.00121

September 23, 2004

Paul Dubenetzky
Chief, Permits Branch
Indiana Department of Environmental Management
Office of Air Quality
100 North Senate Avenue,
P.O Box 6015
Indianapolis, Indiana 46205-6015

Subject: Construction Permit Application, No. 13 Blast Furnace Reline Project, U.S. Steel – Gary Works Plant I.D. No. 089-00121

Dear Mr. Dubenetzky:

Enclosed is the subject permit application. U.S. Steel intends to reline No. 13 Blast Furnace beginning in June 2005. The estimated increases in the emissions of regulated air pollutants (PM_{10}, SO_2, NO_x and CO) are above significant emissions thresholds which requires a Prevention of Significant Deterioration (PSD) and Nonattainment New Source Review (NSR) construction permit.

The enclosed application conforms to requirements specified at Indiana Rules 326 IAC 2-2 and 326 IAC 2-3 with respect to the Ambient Air Quality Analysis, Best Available Control Technology (BACT), Lowest Achievable Emission Rate Analyses and Additional Impacts Analysis. The project will not require any changes to the PM_{10} emission limits specified at Indiana Rule 326 IAC 6-1-10.1 or the SO_2 emission limits specified in the U.S. Steel Variance from the requirements of 326 IAC 7-4.

Enclosed is a check made out to "Cashier – Indiana Department of Environmental Management in the amount of $100.00 to cover the basic filing fee. We understand that U.S. Steel will be invoiced for the remainder of the permit application fee. This project represents a significant investment in the economy of Indiana, and the timing of this project is critical to the Gary Works business plan. An expeditious review of the enclosed application would be greatly appreciated. Please direct comments and questions concerning this application to me at (219) 888-3387.

Sincerely,

Jim Alexander
Manager, Environmental Air Compliance

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC.

12773

RECEIVED
SEP 2 4 2004
State of Indiana
Department of Environmental Management
Office of Air Quality

COPY

12773

INDUSTRIAL ENVIRONMENTAL
MANAGEMENT CONSULTANTS, INC.
804 WABASH AVE.
CHESTERTON, IN 46304
PH. 219-929-4487

BANK ONE, NA
INDIANAPOLIS, INDIANA 46277
20-1-740

9/22/2004

DATE AMOUNT

Cashier - Indiana Department of Env. Mgt **100.00

PAY
TO THE One Hundred and 00/100**********
ORDER
OF

Indiana Department of Environmental Mgt
100 North Senate Ave
Indianapolis, Indiana 46204

Security Features Included. Details on back.

⑈012773⑈ ⑆074000010⑆ 18501020511 9⑈

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC.

12773

Cashier - Indiana Department of Env. Mgt 9/22/2004

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
09/22/2004	Bill		100.00	100.00		100.00
					Check Amount	100.00

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC.

12773

U.S. Steel - Gary Works
089.20118.00121

RECEIVED
SEP 24 2004
State of Indiana
Department of Environmental Management
Office of Air Quality

12773

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC.
804 WABASH AVE.
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BANK ONE, NA
INDIANAPOLIS, INDIANA 46277
20-1-740

9/22/2004

	DATE	AMOUNT
Cashier - Indiana Department of Env. Mgt		**100.00

PAY
TO THE ORDER OF — One Hundred and 00/100**********

Indiana Department of Environmental Mgt
100 North Senate Ave
Indianapolis, Indiana 46204

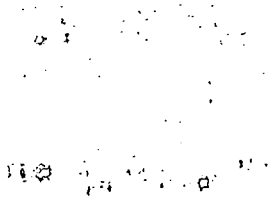
⑈012773⑈ ⑆074000010⑆ 18501020511 9⑈

INDUSTRIAL ENVIRONMENTAL MANAGEMENT CONSULTANTS, INC.

12773

Cashier - Indiana Department of Env. Mgt — 9/22/2004

Date	Type	Reference	Original Amt.	Balance Due	Discount	Payment
09/22/2004	Bill		100.00	100.00		100.00
					Check Amount	100.00



Form GG

Lake County **Governmental Officials Notified**

Pursuant to IC 13-15-3-1 IDEM is required to notify the following parties upon receipt of your permit application:

(1) the board of county commissioners of a county that is affected by the permit application;
(2) the mayor of a city that is affected by the permit application; and
(3) the president of a town council of a town that is affected by the permit application.

This statute also authorizes the department to require a person submitting a permit application to provide information to facilitate implementation of the notice procedure. Pursuant this statutory authority IDEM is requesting that you include in your completed permit application a list of government officials entitled to receive notice of your permit application. At a minimum you should provide the name and address of:

(1) the board of county commissioners of the county in which the facility is or will be located;
(2) the mayor of the city in which the facility is located (if applicable); and
(3) the president of the town in which the facility is located (if applicable).

You should also consider providing the names and addresses of the appropriate government officials of counties, cities or towns adjacent to the facility location if adjacent municipalities expressed an interest in the permit or if emissions from the facility would affect adjacent municipalities. IDEM retains the option to expand the list of affected parties provided by you or to request additional research by you to ascertain affected parties. Your permit application will not be considered complete until the agency receives the list of affected parties as required by state law.

Name: The Honorable Scott King Title: Mayor, City of Gary	Name: Title:
Address: 401 Broadway,	Address:
Gary IN 46402	
Date notified / / Method of notification	Date notified / / Method of notification
Name: Roy Pratt Title: Town Council President	Name: Title:
Address: 401 Broadway,	Address:
Gary IN 46402	
Date notified / / Method of notification	Date notified / / Method of notification
Name: Title: Lake County Board of Commissioners	Name: Title:
Address: 2293 North Main Street,	Address:
Crown Point IN 46307	
Date notified / / Method of notification	Date notified / / Method of notification
Name: Title:	Name: Title:
Address:	Address:
Date notified / / Method of notification	Date notified / / Method of notification

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
We make Indiana a cleaner, healthier place to live.

Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

September 30, 2004

61-53 GR
The Honorable Scott King
Mayor, City of Gary
401 Broadway
Gary, IN 46402

Re: **New Application**
Permit Application: #089-20118-00121
Company: U.S. Steel - Gary Works
Location: One North Broadway
Location: Gary, IN
County: Lake

Dear Mayor King:

Pursuant to IC 13-15-3-1, this letter is to inform you that the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has received a Construction application from the above named company. A copy of the permit application can be found at the City of Gary Public Library.

If you do not find a copy of this application at the above library or you have any questions regarding the application, please dial 800-451-6027 and ask for extension 3-0178 or you may dial direct at 317-233-0178.

Sincerely,

Goldie Roberts

Goldie Roberts
Permit Administration and Development
Office of Air Quality

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Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

September 30, 2004

61-53 GR
Roy Pratt
Town Council President
401 Broadway
Gary, IN 46402

Re: **New Application**
Permit Application: #089-20118-00121
Company: U.S. Steel - Gary Works
Location: One North Broadway
Location: Gary, IN
County: Lake

Dear Mr. Pratt:

Pursuant to IC 13-15-3-1, this letter is to inform you that the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has received a Construction application from the above named company. A copy of the permit application can be found at the City of Gary Public Library.

If you do not find a copy of this application at the above library or you have any questions regarding the application, please dial 800-451-6027 and ask for extension 3-0178 or you may dial direct at 317-233-0178.

Sincerely,

Goldie Roberts

Goldie Roberts
Permit Administration and Development
Office of Air Quality

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Joseph E. Kernan
Governor

Lori F. Kaplan
Commissioner

September 30, 2004

100 North Senate Avenue
P.O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.in.gov/idem

61-53 GR
Lake County Board of Commissioners
2293 North Main Street
Crown Point, IN 46307

Re: **New Application**
Permit Application: #089-20118-00121
Company: U.S. Steel - Gary Works
Location: One North Broadway
Location: Gary, IN
County: Lake

Dear Lake County Board of Commissioners:

Pursuant to IC 13-15-3-1, this letter is to inform you that the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ) has received a Construction application from the above named company. A copy of the permit application can be found at the City of Gary Public Library.

If you do not find a copy of this application at the above library or you have any questions regarding the application, please dial 800-451-6027 and ask for extension 3-0178 or you may dial direct at 317-233-0178.

Sincerely,

Goldie Roberts

Goldie Roberts
Permit Administration and Development
Office of Air Quality

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

Notice of Public Comment

September 15, 2005
US Steel - Gary Works
089-20118-00121

Dear Concerned Citizens(s):

You have been identified as someone who could potentially be affected by this proposed air permit. The Indiana Department of Environmental Management, in our ongoing efforts to better communicate with concerned citizens, invites your comment on the draft permit.

Enclosed is a Notice of Public Comment, which has been placed in the Legal Advertising section of your local newspaper. The application and supporting documentation for this proposed permit have been placed at the library indicated in the Notice. These documents more fully describe the project, the applicable air pollution control requirements and how the applicant will comply with these requirements.

If you would like to comment on this draft permit, please contact the person named in the enclosed Public Notice. Thank you for your interest in the Indiana's Air Permitting Program.

Please Note: *If you feel you have received this Notice in error, or would like to be removed from the Air Permits mailing list, please contact Susan Newton with the Air Permits Administration Section at 1-800-451-6027, ext. 4-2959 or via e-mail at SNEWTON@dem.state.in.us. If you have recently moved and this Notice has been forwarded to you, please notify us of your new address and if you wish to remain on the mailing list. Mail that is returned to IDEM by the Post Office with a forwarding address in a different county will be removed from our list unless otherwise requested.*

Enclosure
PN AAA Cover.dot 1/10/05

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Mitchell E. Daniels, Jr.
Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

September 15, 2005

To: Gary Public Library - Bronswick Branch

From: Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Subject: **Important Information to Display Regarding a Public Notice for an Air Permit**

Applicant Name: US Steel - Gary Works
Permit Number: 089-20118-00121

Enclosed is a copy of important information to make available to the public. This proposed project is regarding a source that may have the potential to significantly impact air quality. Librarians are encouraged to educate the public to make them aware of the availability of this information. The following information is enclosed for public reference at your library:

- Notice of a 30-day Period for Public Comment
- Request to publish the Notice of 30-day Period for Public Comment
- Draft Permit and Technical Support Document

You will not be responsible for collecting any comments from the citizens. Please refer all questions and request for the copies of any pertinent information to the person named below.

Members of your community could be very concerned in how these projects might affect them and their families. **Please make this information readily available until you receive a copy of the final package.**

If you have any questions concerning this public review process, please contact Joanne Smiddie-Brush, OAQ Permits Administration Section at 1-800-451-6027, extension 3-0185. Questions pertaining to the permit itself should be directed to the contact listed on the notice.

Enclosures
PN Library.dot 7/6/05

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Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

September 15, 2005

Mr. James Alexander
US Steel - Gary Works
One North Broadway
Gary, IN 46402-3199

Re: Public Notice
US Steel - Gary Works
Permit Level: Significant Source Modification
Permit Number: 089-20118-00121

Dear Mr. Alexander:

Enclosed is a copy of your draft Significant Source Modification, Technical Support Document, emission calculations, and the Public Notice which will be printed in your local newspaper.

The Office of Air Quality (OAQ) has submitted the draft permit package to the Gary Public Library - Bronswick Branch, 220 W. 5th Ave. in Gary, IN. As a reminder, you are obligated by 326 IAC 2-1.1-6(c) to place a copy of the complete permit application at this library no later than ten (10) days after submittal of the application or additional information to our department. We highly recommend that even if you have already placed these materials at the library, that you confirm with the library that these materials are available for review and request that the library keep the materials available for review during the entire permitting process.

You will not be responsible for collecting any comments, nor are you responsible for having the notice published in the newspaper. The OAQ has requested that the The Post Tribune in Merrillville, IN publish this notice no later than September 19, 2005.

Please review the enclosed documents carefully. This is your opportunity to comment on the draft permit and notify the OAQ of any corrections that are needed before the final decision. Questions or comments about the enclosed documents should be directed to Iryn Cauling, Indiana Department of Environmental Management, Office of Air Quality, 100 N. Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015 or call (800) 451-6027, and ask for extension 3-5692 or dial (317) 233-5692.

Sincerely,

Gina Ramsey

Gina Ramsey
Permits Branch
Office of Air Quality

Enclosures
PN Applicant Cover letter. dot 1/10/05

INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Governor

Thomas W. Easterly
Commissioner

100 North Senate Avenue
Indianapolis, Indiana 46204
(317) 232-8603
(800) 451-6027
www.IN.gov/idem

ATTENTION: PUBLIC NOTICES, LEGAL ADVERTISING

September 15, 2005

The Post Tribune
Casie Newton
1433 E 83rd Avenue
Merrillville, Indiana 46410

Enclosed, please find one Indiana Department of Environmental Management Notice of Public Comment for US Steel - Gary Works, Lake County, Indiana.

Since our agency must comply with requirements which call for a 30-Day Public Notice Period, we request that you print this notice one time, no later than September 19, 2005.

Please send a notarized form, clippings showing the date of publication and the billing to the Indiana Department of Environmental Management, Accounting, Room N1340, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015.

We are required by the Auditor's Office to request that you place the Federal ID Number on all claims. If you have any conflicts, questions, or problems with the publishing of this notice or if you do not receive complete public notice information for this notice, please call Gina Ramsey at 800-451-6027 and ask for extension 3-8586 or dial 317-233-8586.

Sincerely,

Gina Ramsey
Gina Ramsey
Permit Branch
Office of Air Quality

cc: Kenneth Paul: OAQ Billing, Licensing and Training Section
Permit Level: Significant Source Modification
Permit Number: 089-20118-00121

Enclosure
PN Newspaper.dot 1/10/05

INVOICE

PLEASE REMIT TO:

INDIANA DEPT OF ENVIRONMENTAL MGMT
CASHIER OFFICE - MAIL CODE 50-10C
100 NORTH SENATE AVENUE
INDIANAPOLIS IN 46204

Remit from: CST 10021

Customer
US STEEL-GARY WORKS
JAMES ALEXANDER
ONE NORTH BROADWAY STREET
MAIL STATION 70-A
GARY IN 46402

Page:	1
Invoice No:	000045563
Invoice Date:	09/20/2005
Customer Number:	CST100001138
Bill Type:	008
Payment Terms:	NET 30
Due Date:	10/20/2005

AMOUNT DUE: 3,400.00 USD

$3,400.00
Amount Remitted

☐ Note Address Changes Above.

For billing questions, please call 317-233-0604.

Line	Adj Identifier	Description	Quantity	UOM	Unit Amt	Net Amount
		The Office of Air Quality (OAQ) has received your application for a Significant Source Modification permit for U.S. Steel-Gary Works. Before review of this application can be completed, please submit permit fee required by 326 IAC 2-1.1-7.				
		-				
		If OAQ does not receive the fee within thirty (30) days or you have not requested an extension of time, your permit can be denied or revoked. Time period accountability is suspended pending receipt by OAQ pursuant to IC 13-15-4-10.				
		-				
		For questions regarding how your fees were determined, please contact Iryn Calilung in Indiana at 800-451-6027, then ask for extension 3-5692 or outside of Indiana call 317-233-5692.				
		-				
		Air permit fee billing does not constitute approval to construct or operate.				
		-				
		- PLEASE NOTE NEW REMIT TO ADDRESS ABOVE.				
1	089-20118-00121	Significant Source Mod	1.00		3,500.00	3,500.00
2	089-20118-00121	Your Credit	1.00		(100.00)	(100.00)

TOTAL AMOUNT DUE : 3,400.00

Please include a copy of your invoice along with payment.
Payments received without a copy of original invoice or invoice number noted on the check will be returned.

IDEM-AR
PAID

HC Pd. $3,400. — Check #471296

RCVD OCT 12 '05